

THE

Desert

MAGAZINE



MARCH, 1950

35 CENTS



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DESERT CALENDAR

Mar. 5—Bandollero trek to Fortuna gold mine in western Gila mountains, sponsored by Yuma County, Arizona, chamber of commerce.

Mar. 5—First annual Almond Blossom Festival at Quartz Hill, Antelope valley, Lancaster, California. Tours to blossoming orchards, parade, barbecue, gymkhana. Sponsored by Quartz Hill chamber of commerce.

Mar. 5—Don's club annual trek into Superstition mountains. Overnight pack trips, guided shorter hikes into the mountains. From Phoenix, Arizona.

Mar. 5-12—Imperial Valley Lettuce Growers' and Shippers' 22nd annual Golf tournament, Del Rio Country club, Brawley, California.

Mar. 10-12—Second annual mineral and gem show of the Coachella Valley Mineral society, at main building, Riverside county fairgrounds, Indio, California.

Mar. 11-12—Rodeo at Chandler, Arizona, sponsored by Chandler Lion's club.

Mar. 12—Overnight Bandollero trip to Gulf of California, below the border in Mexico, starting from Yuma, Arizona. Trip sponsored by Yuma County chamber of commerce.

Mar. 15-20—Palm Springs, California, invitational Golf tournament.

Mar. 17, 18, 19—Eleventh annual International Desert Cavalcade of Imperial Valley, at Calexico, California, on the Mexican border.

Mar. 18—More than 500 members of the Sons of Utah Pioneers are scheduled to arrive in San Bernardino, California, from Salt Lake City for celebration commemorating the famous Mormon Battalion trek of 2000 miles in 1846.

Mar. 18-19—State Junior championship ski meet, Arizona Snow Bowl, Flagstaff.

Mar. 19—One-day Bandollero trek from Yuma, Arizona, to Parker dam and the lakes above it on the Colorado river.

Mar. 19—Don's club Travelcade to San Carlos Indian reservation, from Phoenix, Arizona.

Mar. 22-25—Annual Desert Circus, varied events, Palm Springs, California.

Mar. 24-26—Annual Tucson, Arizona, Livestock show at Tucson rodeo grounds.

Mar. 24-26—Annual World's Championship rodeo, sponsored by Phoenix, Arizona, Junior chamber of commerce.

Mar. 25-26—State Combined championship ski races, Arizona Snow Bowl, Flagstaff.

Mar. 26—Don's club Travelcade to Boyce Thompson Arboretum at Superior, Arizona.

Mar. 27—Dances in most Keresan Indian pueblos of New Mexico: Santo Domingo, San Felipe, Cochiti and others, also Jemez pueblo. Beginning of Easter ceremonies.

Mar. 1-31—Open season on Javelina in Arizona. Special license and tag required. Can be taken only with bow and arrow or rifle using center-fire cartridge.



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Street scene in Silver Reef about 1880. In the background, the Elk Horn saloon, J. N. Louder's general store and the postoffice. These buildings have long since disappeared. From one of Alex Colbath's old photo collection.

Mining experts said that silver did not and could not occur in sandstone. And so the world was skeptical when news went out that a big silver strike had been made in the sandstone region of southwestern Utah. But before the reef was worked out more than ten million dollars in silver bullion had been taken from the mines at Silver Reef—and there is still at least one old-timer who expects the camp to boom again.

Despite these crumbling walls, Alex Colbath denies Silver Reef is a ghost town.

Buckboard Days at Silver Reef

By NELL MURBARGER

WITH A pleasant tingle of anticipation, I headed the car out the little dirt road which led toward the foothills and Silver Reef,

Utah's famous old mining camp. It was a morning specially tailored for adventuring. Cottonwoods along the creek were tipped in October gold and the



lonely mountain wind which rustled their leaves carried with it a hint of frost.

Twenty-five miles to the east lifted Zion's calico-colored peaks. Across the northeast was flung the misty, blue rooftop of Kolob Plateau, and along the northwestern horizon, the dark bulk of Pine Valley mountain. Immediately ahead of us stretched a long rampart of red bluffs, at the foot of which lay a low, white sandstone ridge. Here was the "reef" which 75 years before had given name to a city and a mine famed around the world.

Skirting a rocky ridge and winding across a sunny slope spattered with boulders and scrub junipers, our road soon brought us face to face with the remains of what had once been Southern Utah's largest settlement.

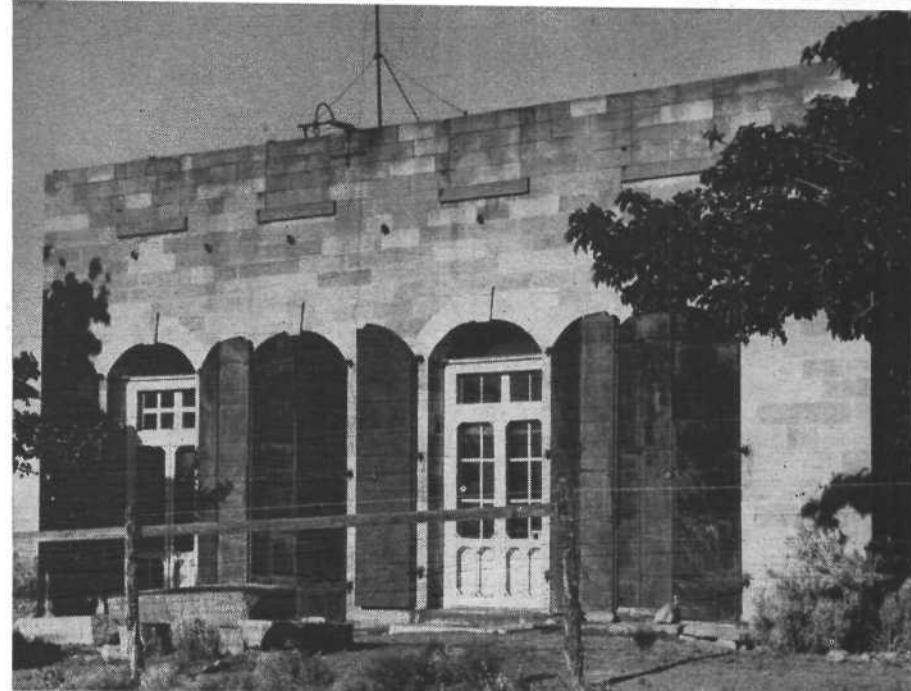
That a city which had boasted a gas-lit main street a mile in length, with a full complement of stores, hotels, homes, lodges, churches and schools, could so nearly vanish from the earth seemed incredible. Lost beneath a tangled thatch of sage and rabbit brush lay the streets. A few gaunt, hollow shells of stone buildings lifted crumbling walls above the red earth, and tottering on the rim of the ravine stood the ruins of an old mill.

Of the entire collection, only two buildings were remotely habitable. Before the larger of these the little mountain road drew up and stopped.

Architecturally as uninspired as a peanut butter sandwich, the square yellow rock structure had originally served as the Wells Fargo bank building. Any claim to beauty it ever had must have lain in its skillfully-dressed sandstone front—two thirds of which was blanketed behind an impregnable breastworks of tall black iron doors and shutters.

Muffled voices issuing from within the spooky old building immediately suggested a conclave of ghostly bankers—or possibly bank robbers—poring over stacks of phantom gold. But since even ghosts have a right to their privacy, I rapped experimentally on the iron door. Nothing happened. When I pounded a second time and loosed a hailed query, "Anybody home?" the voices cut off sharply. A moment or two of silence; and then, in some obscure part of the building a male "ghost" thundered impatiently, "Well, dammit! Come on in—the door ain't locked!"

Pushing the old bank door open I ventured back through a narrow, dimly-lighted corridor, at the far end of which light shone from beneath a second door. To a romanticist dreaming of spectral agents and ghostly gold



Above—Alex and Mayme Colbath, lone survivors of Silver Reef, with the aged "ruffle fluter" found by Mayme in the ruins of the Chinese laundry.

Below—Old Wells Fargo bank in which the Colbaths reside.

it was a little upsetting to step through that door into a bright, warm kitchen, tenanted by Alex and Mayme Colbath—present owners of Silver Reef, and as unghostly a pair as one might ever find.

Vivacious Mayme hurried around the oilcloth-covered table to draw out a chair for me. Almost before I had my hat off, we were knee-deep in talk of Silver Reef and its fabulous boom days of two generations ago.

Very early in our conversation I learned that it was not altogether prudent to refer to Silver Reef as a ghost town.

"Silver Reef's no ghost!" indignantly bristled white-haired Alex Colbath when I first made the mistake of terming it so. "It's never been completely deserted! Someone's always lived here."

And, technically speaking, someone always has. Those who insist upon delving into vital statistics will find that for the last 22 years the town's permanent population has been limited to Alex and Mayme. Alex lived at the Reef even before that. He wouldn't say exactly how long—"mebbe 33 or 34 years"—but folks in the nearby settlement of Leeds seem to have the impression that he arrived on the scene about the same time as the red bluffs to the west of town.

Another thing I discovered early in our conversation is the fact that Silver Reef occupies a very large place in the hearts of both Alex and Mayme. On their tables and in their cupboards are relics salvaged from the ruins and ore samples from the mines. On the walls of Alex's office—the main lobby of the bank—hangs a galaxy of priceless old wood cuts and early photos showing the town in its heyday.

As we sat around the crackling wood fire in the kitchen, and later, as we wandered among the crumbled stone ruins on the surrounding slope, Mayme kept up a running fire of anecdotes; stories about this building and that, of the Reef's quaint characters and pioneer goings-on—all stories heard first hand from her parents and friends who had known Silver Reef in the old days.

Although not a native of the Reef she was born within sight of it in the little Mormon town of Leeds, a mile down the ravine by foot trail. After graduating as a nurse at the L. D. S. school in Cedar City, she went east to practice her profession.

"But the East wasn't for me!" Mayme Colbath declared with a quick little grimace. "I guess I have too much Utah and sand in my veins to be satisfied anywhere else! I came back to the hills."



He was "mayor" of Silver Reef's Chinatown during the boom days.

Even at the Reef, she said, her early nurse training has been put to good purpose in helping care for her lively flock of grandchildren who live on a mountain ranch a mile away.

"Over yonder was Chinatown," she continued, waving toward a section of hillside as barren of buildings as it was of Celestials. That some 250 Chinese had once lived there, operating shops and laundries and cafes, and functioning under their own Chinese mayor, seemed almost past belief. Scarcely a stick or stone remains as evidence of their one-time occupancy.

"Mother used to tell me how exciting it had been to come up to Silver Reef and browse around the little Chinese shops with all their strange merchandise and foreign odors," she went on. "All the ladies in the towns around brought their best dresses to the Chinese laundrymen here to have their ruffles fluted because the special hand fluters the Chinese used did the work so much nicer than an ordinary flatiron. And what do you think! Not long ago I was poking around in the brush where one of the laundries used to be, and what should I find but one of those old cast-iron ruffle fluters! The date on it is 1866 and it's still just as serviceable as the first day it was used!"

While I learned a great deal of Silver Reef's story from Alex and Mayme Colbath, I didn't get all of it from them. Some I gleaned from old timers at Leeds and St. George and Pioche. While not all their stories agreed in all particulars, their main components form a tale unique in Western mining history.

There are several versions regarding the Reef's discovery. Some claim that the mine here had been worked by Spaniards long before the coming of pioneer prospectors, and even the mine's discovery or rediscovery by Americans is chronicled in several different ways.

Around Utah and Nevada mining circles, the version I heard most frequently centers about one "Metalliferous" Murphy who operated an assay office in the boom camp of Pioche, just across the Nevada line.

Murphy's assays, it seemed, almost always showed high values, and very possibly he was a trifle more sanguine than scientific. At any rate, miners of the Pioche district had reached the point where they didn't put much faith in his reports.

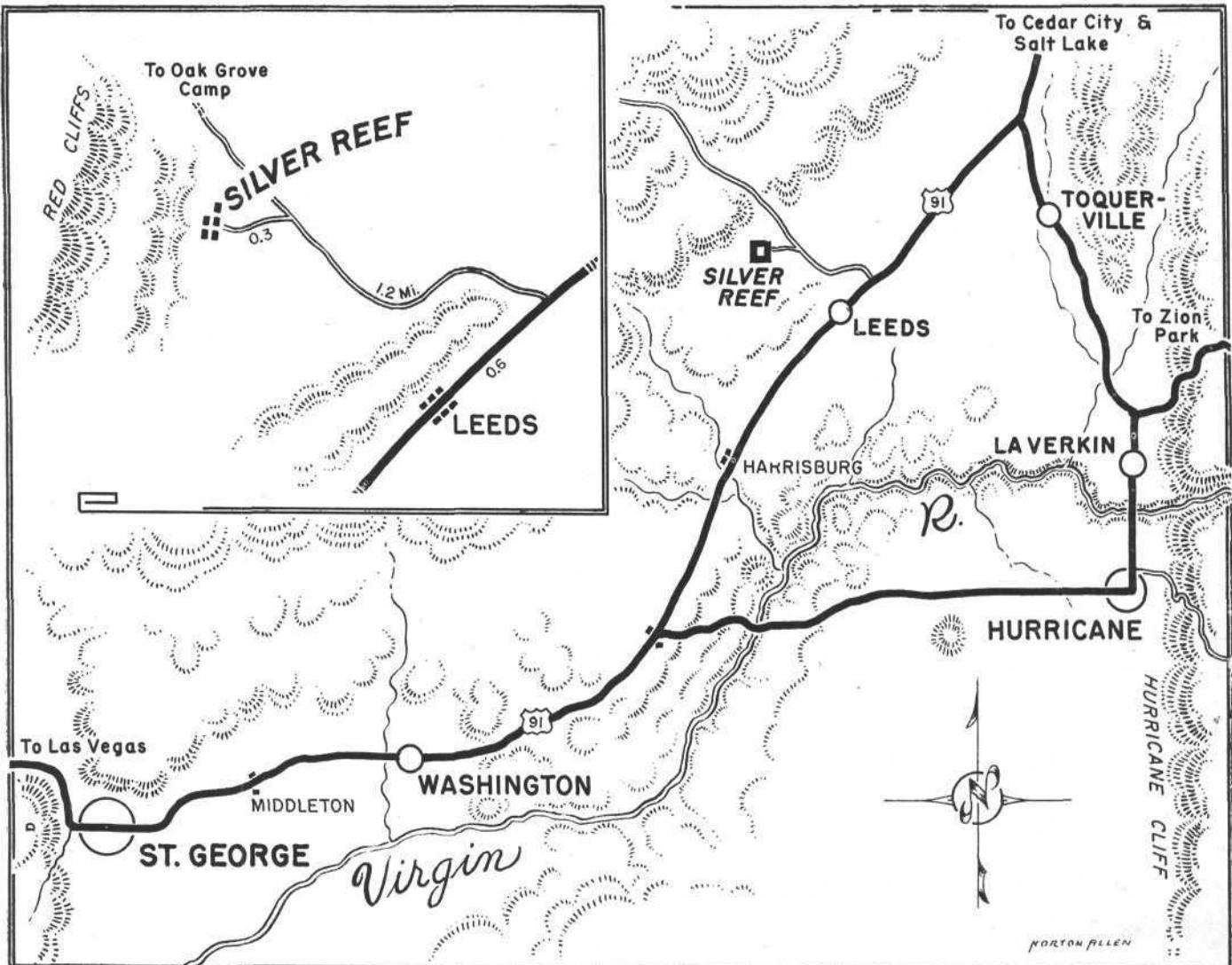
One day as a group of prospectors stood on a Pioche street corner discussing where they might obtain reliable assays, a Mormon colonist from the Virgin Valley drove up in a farm wagon and inquired if any of the mining gentlemen would be interested in buying garden produce, firewood, or perhaps a grindstone—grindstones from the Leeds quarry then being in common use in many Nevada mining camps. He had started to Pioche with two excellent stones, the colonist continued, but one had unfortunately become broken en route.

A broken grindstone—possibly the most worthless thing in the world . . . But wait! Sandstone—that was it! Everyone who knew beans about mining knew that sandstone never carried metallic values. Okay! They'd just have a little fun with Mister Murphy.

Mortaring the broken grindstone into still smaller fragments to thoroughly mask its identity, the miners delivered the material to Murphy, asking him to run an immediate assay on it.

When Murphy's report showed the "sample" to run 200 ounces of silver to the ton, perpetrators of the joke hit the ceiling.

There seems to be considerable disagreement concerning Murphy's fate. One story has him strung up to the nearest tree; another has him ridden out of town on a rail. Others declare that Murphy became so angered by his townsmen's sarcastic jibes that he locked up shop, traced the grindstone



to its source, and there discovered an entire reef of sandstone rich in horn-silver.

Maybe Murphy discovered the reef; maybe he didn't. But at least someone did. One published account relates that the original discoverer found ore running \$17,000 to the ton but was so afraid someone would jump his claim while he was away recording it that he filled his prospect hole to hide it from view. Upon returning to the reef—according to this tale—he was never again able to relocate the rich deposit. The Colbaths got a good laugh out of the foregoing yarn. In addition to its obvious improbability, Alex pointed out that the richest ore ever known to have come from the reef ran only about 400 ounces to the ton. High grade, to be sure, but still a far cry from \$17,000!

Various factors kept the new strike from developing as rapidly as one might have expected. One thing which materially retarded a boom was the mining world's reluctance to credit the new discovery. Never before in the history of the civilized world had sil-

ver been found in sandstone, and now despite what seemed concrete evidence of such occurrence—mining experts still clung stubbornly to the old belief that silver did not and geologically could not occur in sandstone. In the face of such skepticism it was only natural that potential developers were doubly cautious in loosening their purse strings.

Successfully prospected as early as 1866, it was not until 1870 that the reef was organized as Harrisburg Mining District and the first claim recorded. Development, however, remained virtually at a standstill until 1874 when Elija Thomas had the bright idea of forwarding some samples of the ore to Walker brothers, Salt Lake bankers.

Walkers were opportunists of the first water. All the mining engineers of the world might declare this reef an impossibility, but what Walkers saw with their own eyes, Walkers believed. The samples looked good. So good that the Salt Lakers dispatched to the scene three of their ablest mining men—Wm. T. Barbee, Thomas McNally and Ed Maynard.

When Barbee found hornsilver even in petrified wood, he lost no time in staking 22 claims on the Tecumseh ridge and wired back to Salt Lake for supplies and mining equipment.

Walkers' backing gave life to the camp and in a matter of weeks the town of Silver Reef had been laid out and named, and a full-blown stampede was under way.

On foot and horseback, by mule and burro and Concord stage and freight wagon, men streamed into the new camp. Miners, lawyers, merchants, gamblers, boom-town camp-followers. Development was rapid. Soon a mile-long board walk was flanked on either side by frame and stone business buildings—including a plethora of saloons, dance and gambling halls. There was a volunteer fire department, a brass band, a school, three cemeteries and a good representation of lodges and brotherhoods.

The year 1877 found the Buckeye mine with a daily production of 1000 ounces of silver bullion, averaging 990 in fineness. During 1878 the Christy mill processed more than 10,000 tons of ore valued at \$330,000. During the

five-year period beginning in 1875, the Reef's production of silver bullion reached 3,319,054 ounces, valued at \$3,808,890, and by 1880 five large amalgam stamp mills were in operation along the ridge.

While mining at the Reef was to continue sporadically for several more decades—until \$10,500,000 in ore had been taken out—it was in the years between 1875 and 1880 that the Reef knew its greatest prosperity.

Strangely, it was never a town marked by extreme lawlessness. While the inhabitants of Southern Utah were almost wholly of the Mormon faith, tenets of that church did not sanction the mining of silver or gold. As result, Silver Reef existed as a Gentile stronghold in a Mormon dominated land—a situation which one might expect to yield periodic fireworks. Such was not the case. Some of the most fascinating anecdotes of the Reef's early years concern incidents of Mormon and Gentile cooperation.

Doubtless no resident of the Reef enjoyed greater respect than the beloved Catholic priest, Father Lawrence Scanlan, later bishop of the Salt

Lake diocese. When Father Scanlan arrived in the roaring mining camp by muleback in 1877, he found a place with urgent need for both church and hospital. Determined that both should be built as rapidly as circumstances permitted, the earnest young priest circulated through the saloons, the gambling dens and houses of ill fame, and from this strata of society least touched by Godliness, came funds for the undertaking. Actual work of construction found Father Scanlan working side by side with the laborers, laying stones and sawing and nailing boards.

Impressed by the young padre's sincerity and industry, leaders of the Latter Day Saints church offered him free use of the Mormon tabernacle at St. George as a place to hold services until erection of his own church was completed. And because he had not had time to organize a choir, Mormon choristers at St. George graciously volunteered to provide music, even learning to sing the difficult Catholic masses in Latin!

From a swashbuckling boom town of 5000 persons, where firewater and

gold flowed with equal facility, Silver Reef's decadence followed a familiar pattern.

As silver deposits close to the surface were worked out and it became necessary to go deeper for paying ore, production costs mounted. Water seepage in the mines further skyrocketed expense of operation, and to partially offset such increases, wages were slashed. The miners were called out on strike; strike leaders were jailed, and merchants who had extended credit on the assumption of continued paychecks found themselves in financial trouble. Business failures multiplied. With silver prices nose-diving as results of world manipulation, original developers of the Reef began to leave, salvaging what they could.

By 1891, practically all of the Reef's mines and mills were at a standstill and the last decade of the 19th century yielded but 206,069 ounces of silver.

Closing of each mine further depleted the Reef's dwindling population and resulted in still more homes and business houses being left to the mercy of wind and weather. In time these abandoned buildings were claimed by

Business directory of Silver Reef in 1886. Building in the center is the Harrison House—once the camp's leading hotel. Copied from an old photo owned by Alex Colbath.

J. H. LOUDER, BLD.		CROCKWELL & O'FLINGER, P.A.	
T. C. BURNS, ATTORNEY AT LAW.	Stormont Mining Company of Utah. Col. W. J. Allen, Manager.	Stormont Mill. Lie. Virgin (Baptist). Rev. F. Cleop. Supt.	CHRISTY M'G M CO. of CALIFORNIA. R. T. GILLESPIE, Secy.
Woolley, Lund & Co. R. C. LUND, MANAG. General Merchandise and Mine Supplies.	W. B. Sager. Merchant. BARCAINS FOR CASH. "Fashion Square."	HARRISON HOUSE. THE LEADING HOTEL. SAMPLE ROOMS. P. HARRISON, Prop.	FRED. JOY, Secy. R. WALTERS, ASSISTANT.
THE POPULAR RESORT. Elk Horn SALOON. George Miller. 1000. BARTENDER. HAVE COME TO STAY.	W. M. UREN BARBER SHOP.	J. A. TURRILL. MERCHANDISE. Wood & Lumber. Bonanza Flat.	Peter Harrison. General Merchandise. LEADER IN NOVELTIES. L. JACKES, W. H. BARRISON, MANAGERS.
CALIFORNIA BREWERY SALOON. BILLIARD HALL. J. H. LOUDER, BLD.	LIVERY STABLE. SABLE HORSES & CARRIAGES. G. E. AULD, Prop.	LEACHING WORKS & CONCENTRATORS. MONEY-SAVING PROCESS. BOLLEY, HARDING & HERBERTS, PROPRIETORS.	CAPSTOG SALOON. THE LEADING BAR. Oldest in Camp. JOHN H. CASSIDY, Prop.
PEOPLES MARKET. CHOICE MEATS. Antlers & Sound. FRESH MEATS.	BAKERY. Fresh Bread every Morning. N. B. SINCLAIR, Prop.	Mc QUARRIE, MORRIS & SMITH. All Kinds of Furniture. CONTRACTORS & BUILDERS.	Julius JORDAN. JUSTICE OF THE PEACE AND NOTARY PUBLIC.
PIONEER SALOON AND Billiard Rooms. M. H. QUINN, Prop.	A. LEMMON. CARPENTER & BUILDER.	DENTISTRY. Only for a few days. Dr. C. W. BONHORN.	T. K. STEVENS. NOTARY PUBLIC.
Uncle Abram Levy's SALOON. NORTH MAIN STREET.	SAMUEL IRVIN CONTRACTOR.	Cosmopolitan RESTAURANT. "BEST HASH" all. Grubbs, not.	M. J. MEEHAN. LEADING SHOEMAKER.
S. S. Cox. Constable.	Silver Reef Academy. (Graded.) Prop. B. R. STEVENSON, Prop.	N. Christensen. SHOEMAKER. Works by the Stars.	SAM WING. Chinese Drug Store, Tack Goods and LAUNDRY.
		LEO. WELTE'S CALIFORNIA BREWERY.	ED. CUMMING. The only TAILOR.
			HARRY & CAROLINE HAYES, Proprietors.

the state for delinquent taxes. Offered for sale at auctions, public interest was less than lukewarm until the purchaser of an old saloon assertedly came upon a forgotten cache of \$10,000 in gold coin. With that report, bidding boomed and even rock buildings were bought and torn down with anticipation and fervor. No other treasure caches were reported found.

Early in the present century Alex Colbath had become interested in the Reef, and in 1916, with the first World War bolstering the silver market, he raised \$160,000 and organized the Silver Reef Consolidated Mining company.

Leased to a New York concern, elaborate plans were made to build a mill and reopen the old mines with modern machinery—plans effectually squelched by another slump in silver prices. In 1928, controlling interest in the company was purchased by American Smelting & Refining which sunk a single test shaft, pulled up stakes and retired from the field.

Despite this and several other costly fiascos—one of which was calculated to salvage quicksilver from the dumps—Alex Colbath's consummate faith in the old mines remained unshaken. He mapped their underground workings and studied their formation. He ate, slept and breathed Silver Reef... and in time, he acquired full ownership of the property.

For more than 10 years this man's driving hope has been to find an outfit which will work the mine as he knows it must be worked to recover the metal still there.

One outfit had been negotiating to buy the mine and the deal was nearing completion when Alex learned that they intended to lease it to others, strip the high grade ore and abandon the rest. That settled it. There wasn't any sale.

On another occasion he had an offer from a movie company which wished to buy the townsite, restore it to its original form and use it in making Western movies.

"They offered Alex almost as much as he is asking for the mine," said Mayme. "The only trouble was, they stipulated that if they bought the place they wouldn't permit the mine to be worked as it might interfere with their own plans. That finished it. Alex wouldn't sell."

"Some of our friends think we ought to farm the place," she went on. "The soil's rich and we could irrigate the whole flat from Quail creek. Others ask why we don't put in a dude ranch."

"Farm! Dude ranch, hell!" exploded Alex. "I'm a mining man. Been a miner all my life! When Silver Reef comes

back—and it'll come back, you'll see!—it'll be as a mining camp, not as a hawg ranch!"

If faith and optimism have anything

to do with it, Silver Reef will come back. If it doesn't Alex and Mayme Colbath will at least give the ghosts a good run for their money.

Desert Quiz

Desert Magazine's monthly quiz is designed both as a test of knowledge for those who are familiar with the desert country, and as a bit of coaching for those who aspire to know more about this great desert playground of the Southwest. 12 to 14 correct answers is a fair score, 15 to 17 is good, 18 or above is exceptional. The answers are on page 19.

- 1—Your car is stuck in the sand. Probably the tool that will help most in getting it out is a—
Pump..... Pair of Pliers..... Shovel..... Screwdriver.....
- 2—Largest Indian reservation in the Southwest is—
Apache..... Navajo..... Mojave..... Papago.....
- 3—A piton is one of the tools used by a—
Miner..... Surveyor..... Indian silversmith..... Rock-climber.....
- 4—Material generally used by Hopi Indians in making Kachina dolls is—
Cottonwood..... Clay..... Cedar..... Pinyon.....
- 5—Center of the Chimayo weaving industry in the Southwest is in—
Southern Arizona..... California..... New Mexico..... Utah.....
- 6—If you wanted to take a picture of the Great White Throne you would go to—
Zion National Park..... Grand Canyon..... Monument Valley..... Bryce Canyon.....
- 7—The highway over the White Mountains of eastern Arizona between Springerville and Clifton is—
Sunkist Highway..... Coronado Trail..... Apache Trail..... Sunset Route.....
- 8—The Gila river enters the Colorado—
Above Hoover Dam..... Near Parker, Arizona..... Below the Mexican boundary..... Near Yuma, Arizona.....
- 9—Crystals most commonly occurring in the geodes are—
Quartz..... Tourmaline..... Gypsum..... Hematite.....
- 10—Indian women in the roadside stands along the highway between Albuquerque and Santa Fe, New Mexico, generally sell—
Beadwork..... Basketry..... Pottery..... Blankets.....
- 11—Roosevelt dam is in the—
Gila River..... Salt River..... Hassayampa River..... Colorado River.....
- 12—The tree most commonly used for windbreaks in the Southwest is—
Tamarisk..... Willow..... Palo Verde..... Cottonwood.....
- 13—The late Ernest Thompson Seton of New Mexico was a—
Mining engineer..... Indian trader..... U. S. Senator..... Writer.....
- 14—Highest peak visible from the Colorado desert of Southern California is—
San Jacinto..... San Gorgonio..... Santa Rosa..... Mt. Whitney.....
- 15—The book *The Saga of Billy the Kid* was written about a—
Famous stage driver..... Discoverer of the Comstock lode..... Notorious outlaw..... Trapper and scout.....
- 16—Indians who own and manage the famous hot springs at Palm Springs, California are—
Chemehuevis..... Cahuillas..... Cocopahs.....
- 17—The desert town which publicizes itself as "The Dude Capital of the World" is—
Prescott, Arizona..... Palm Springs, California..... Las Vegas, Nevada..... Wickenburg, Arizona.....
- 18—Desert mistletoe never grows in one of the following trees—
Ironwood..... Smoke tree..... Mesquite..... Catsclaw.....
- 19—Saguaro fruit was once an important item of food for the—
Yuma Indians..... Hopis..... Papagos..... Hualpais.....
- 20—Mexican Hat is the name of a settlement in—
Utah..... Arizona..... New Mexico..... Nevada.....



PICTURES OF THE MONTH . . .



DINNERTIME

First prize in Desert's January contest went to G. H. Remmerde, Bishop, California, for above photo of "Uncle" Stamford, an old-timer residing near Kingman, Arizona. Picture was taken at 11:00 a.m. with Zeiss Ikonflex, 1/25 at f.11.

AZTEC RUINS

Ben Pope, Dinuba, California, won second place with accompanying picture of Indian ruins at Aztec, Colorado. He used a Medalist camera, shot the picture at 2:00 in the afternoon, 1/100 at f.16.

He Named Lake Cahuilla

By J. WILSON McKENNEY

WITH outstretched arm the Cahuilla Indian chief pointed first to the clearly defined horizontal shoreline at the rocky foot of the Santa Rosa mountains, then swept his hand toward distant white salt flats glistening in the bright sunlight. Through an interpreter he talked to the tall white man who stood attentively beside him on a high outcrop of rocks.

"The waters of the great lake dried up *poco a poco* and my father's people moved their village down from the mountains to hunt and fish along the shore. Then the waters returned and overwhelmed many of my father's people." The dusky chief turned to point toward the northwest. "Many, many of my people lived in abundance beside the great sea. That is where they made fish traps . . ." The old chief's voice trailed away.

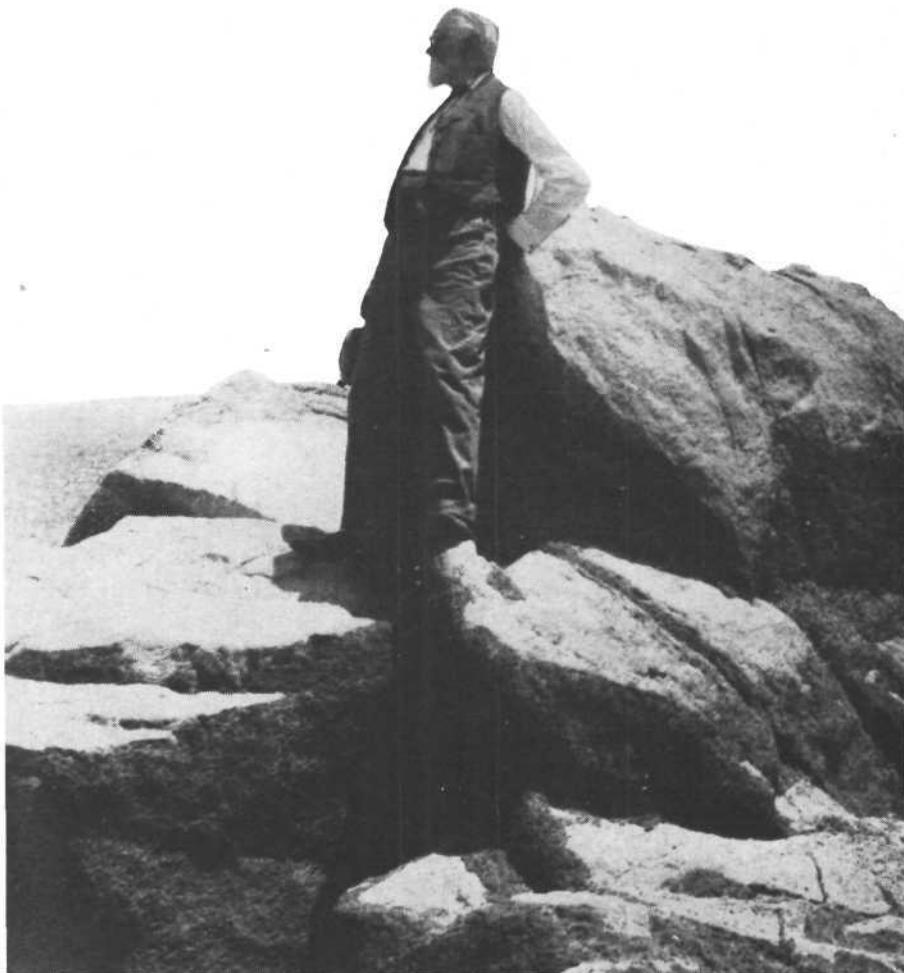
The place was on the crest of Travertine Point in northwest Imperial county, California. The time was a morning in the fall of 1853. The white man was 27-year-old William Phipps Blake, Yale '52, geologist and mineralogist for Lt. R. S. Williamson's expedition.

Blake was the first white man to examine with scientific eyes the great below-sea-level basin now occupied by Salton sea and the Imperial reclamation project. It was virtually dry when he first saw it, but an inland sea 110 miles long and 34 miles wide had once filled this basin. The story told by the Cahuilla chief was confirmed by evidence Blake found in many places—travertine coated rocks along the old shore line, millions of tiny marine shells in the sands. In his exhaustive reports Blake paid a tribute to the Indians who had once dwelt on its shores. He called it Lake Cahuilla.

The young geologist did not pretend to be the discoverer of Lake Cahuilla. He knew that Sebastian in 1774, Anza in 1775 and 1776, and the Sonora gold-seekers in 1849 had passed through the great dry depression. Captain A. R. Johnson, a member of Lieut. Col. W. H. Emory's expedition in the late '40s, had written: "At no distant day this place which is now a dry desert was once a permanent lake." Emory himself had reported that "the sink contained a basin three-quarters of a mile long and a half mile wide in which water had receded to a pool."

In addition to naming Lake Cahuilla

The present Salton Sea in Southern California was formed when the Colorado river ran wild in 1905-6-7. But the waters known today as Salton were not the first to fill this great below-sea-level basin. William P. Blake, geologist for an army engineering expedition, first identified this as an ancient lake bed in 1853—and named it Lake Cahuilla in honor of the Indians who had lived for countless generations on its shores. Here is a brief biographical sketch of a very modest man who played an important role in western history 100 years ago.



Photograph taken in 1906 at Travertine Point, when William Blake returned to find the ancient lake bed he had named being refilled by flood waters from the Colorado river.

(modestly protesting efforts of friends years later who wanted to call it Blake sea), young Blake named the Colorado desert (after the Spanish wording meaning red) for the red silt color of the floor.

Born in New York City in 1826, Blake received his early education there and earned his doctor of philosophy degree from Yale in 1852. An outstanding student with robust good health and premature gray hair, his services after graduation were eagerly sought. Employed by the New Jersey Mining and Exploration company, he

also lectured on mineralogy at New York Medical college and organized the mineral department of the New York World Exposition of 1853. In the meantime President Pierce, mindful of the need to bind the nation together with steel rails, ordered the army to "locate a feasible route for a railroad from the Mississippi river to the Pacific ocean." Lt. Williamson was selected to command the survey party and he accepted Smithsonian Institution's recommendation of William P. Blake as official geologist and mineralogist. Blake readily laid aside his

opportunities in the city to turn toward the West.

In June the wagon-train left San Francisco, traveling south through San Joaquin valley. Engineers set transits in Walker pass, the Tehachapi, and San Gorgonio pass while Blake roamed at will with his geologist's pick and specimen bags. The company tested each opening in the ranges which barred the way south, like a fox seeking a way through a picket fence.

That Williamson and his men did a thorough job was attested years later when great railroad companies laid steel rails along their line of stakes. Railroad engineers noted the gradual approaches and relatively low elevation of San Gorgonio pass and pressed their endorsement of a southern route. For topographical reasons the route east from Yuma lay in Mexican territory. Before the end of the year Secretary of War Jefferson Davis and Minister to Mexico James Gadsen had negotiated the Gadsen Purchase, which added 45,000 square miles of desert to the south edge of Arizona.

As the expedition moved slowly toward Fort Yuma, the young geologist made an exhaustive study of the great desert bowl, traveling by horseback down the east and west sides and ex-

ploring to the mouth of the Colorado. He discovered fossils above sea level at Carrizo creek, prehistoric oyster shells a foot in diameter on Yuha plain. He concluded that the basin had at one time been a prolongation of the Gulf of California, that the glacial age had caused the river to deposit a great amount of silt in the delta, forming a natural dike. Only the mightiest river floods broke the dike. He named New river from its unexpected appearance flowing from Volcano lake, at the summit of the dike, northward to Salton sink.

Four years later Blake had completed his learned and exhaustive "Preliminary geological report of a reconnaissance and survey in California" (House Executive Document, 33rd Congress). Its conclusions withstood the test of time and experience, establishing a reputation for thoroughness and soundness which continued to be reflected in dozens of his articles published in scientific and technical journals.

He had the world for his workshop. When he had completed his field work for Lt. Williamson the government sent him to the gold fields to make scientific reports on the Mother Lode.

In 1857 he joined Lt. Edward F.

Beale for a survey of a wagon road across northern Arizona. This adventure involved the famous experiment with a camel herd imported by Secretary Davis. Unlike others in the party, Blake did not report his dislike of the evil-smelling ruminants but confined his writing to a gleeful description of the discovery of ancient *Chalchihuitl* (turquoise) mines of the Aztecs.

He completed a survey of the rich Comstock lode at Virginia City, Nevada. In 1861 he accepted a commission as mining engineer for the Japanese government. After establishing the first mining college in the empire, he appeared the next year in Alaska.

Ascending the Stikine river, Blake pursued the studies of the Alaskan wilderness which he described glowingly to Secretary of State William H. Seward. President Grant sent the Blake report to congress and it swayed that body's decision in favor of the purchase of "Seward's Folly". That Blake's name is virtually unknown in connection with United States acquisition of Alaska is evidence of modesty and unselfish reticence regarding his personal achievements which continued throughout his entire career. He might have capitalized heavily on the subsequent world-wide interest in the golden Yukon if he had shown more self-interest.

In 1864 Blake was appointed professor of geology and mining at the new University of California, where he organized the college of mining and agriculture. It was during this three-year period in California that he studied the Yosemite valley and became the first to express the belief that it was wrought by erosional processes. Glaciation played its part, he believed, but the major role was enacted by streams flowing from the ice. Unfortunately, his remarkably accurate analysis was revealed only to scientific colleagues, leaving it to John Muir and others to popularize the glacial erosion theory.

In all his writings, the eminent geologist never indulged in extravagant phrases or promoted a cause by persuasion alone. His lucid style and cold logic brought him a wide following among scientists and students. He had none of the flamboyance of contemporary journalists. If he was interviewed by the press of his day, biographical data has not survived in permanent form.

As representative of the Pacific coast states, Blake was appointed a U. S. Commissioner to the Paris Exposition of 1867, later editing the State Department reports of the commission, which appeared in six volumes. He

Photo Contest Announcement

Desert Magazine staff is always seeking exceptional pictures, and in order to obtain them, prizes are offered each month to both amateur and professional photographers who submit the best prints. The pictures must be essentially of the desert, but there is a wide range of subjects: landscapes, rock formations, wildlife, human interest, mining and prospectors, rock collecting, Indians, waterholes, sunsets and cloud effects—the field is almost unlimited. Pictures with strong black and white contrast are favored by the judges.

Entries for the March contest must be in the Desert Magazine office, Palm Desert, California, by March 20, and the winning prints will appear in the May issue. Pictures which arrive too late for one month's contest are held over for the next month. First prize is \$10; second prize \$5.00. For non-winning pictures accepted for publication \$3.00 each will be paid.

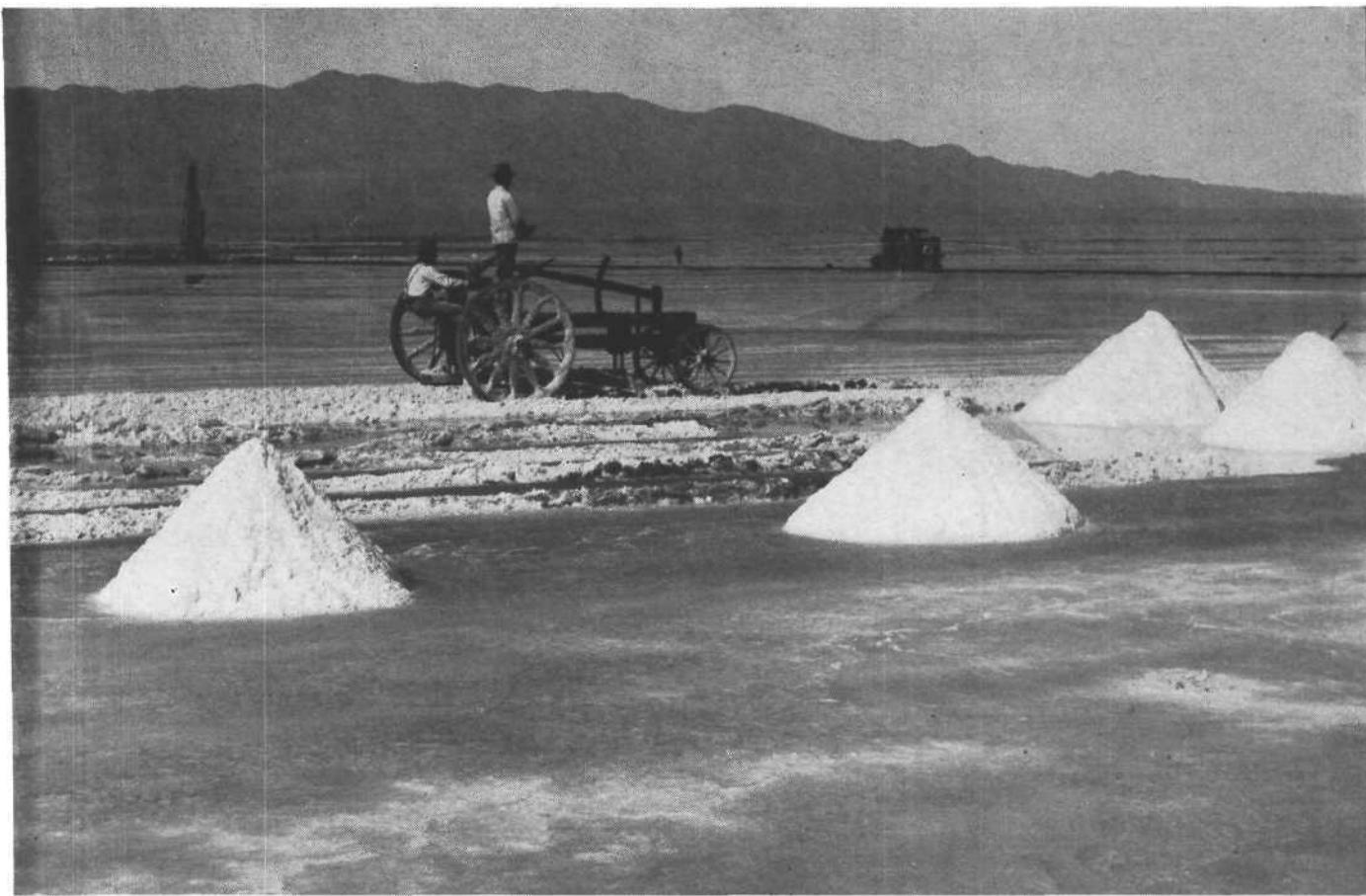
HERE ARE THE RULES

- 1—Prints for monthly contests must be black and white, 5x7 or larger, printed on glossy paper.
- 2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.
- 3—PRINTS WILL BE RETURNED WHEN RETURN POSTAGE IS ENCLOSED.
- 4—All entries must be in the Desert Magazine office by the 20th of the contest month.
- 5—Contests are open to both amateur and professional photographers. Desert Magazine requires first publication rights only of prize winning pictures.
- 6—Time and place of photograph are immaterial, except that it must be from the desert Southwest.
- 7—Judges will be selected from Desert's editorial staff, and awards will be made immediately after the close of the contest each month.

Address All Entries to Photo Editor

The Desert Magazine

PALM DESERT, CALIFORNIA



Recovering salt from the dry floor of ancient Lake Cahuilla in 1903—two years before the Colorado river broke through and inundated this area, forming the present Salton Sea.

then began a long period of intensive activity which revealed to the world the West's great mineral resources through skillfully arranged exhibits at great expositions. However, he found time in 1871 to act as the scientist member of an exploration group to the island of Santo Domingo. Two years later he visited the Vienna exposition for studies which contributed to the success of the Independence Centennial exposition of 1876 at Philadelphia, which he headed for a time as executive director.

During his world-wide travels, Blake made a large collection of mineral specimens which became the nucleus of the present collection at the National Museum in Washington, D. C. He also continued active collaboration with Smithsonian Institution. In 1878 he received the Chevalier of the Legion of Honor decoration from France after winning the Grand Prize at Paris.

Not yet content to rest on his laurels, Blake returned to the West where his services were in demand as a practical geologist. In 1890 he invented a new revolving calcining furnace, following the precedent set by his maternal grandfather, Capt. Jonathan Mix,

inventor of the carriage spring; and his father, Dr. William Blake of New York, a leader in development of modern dental technique.

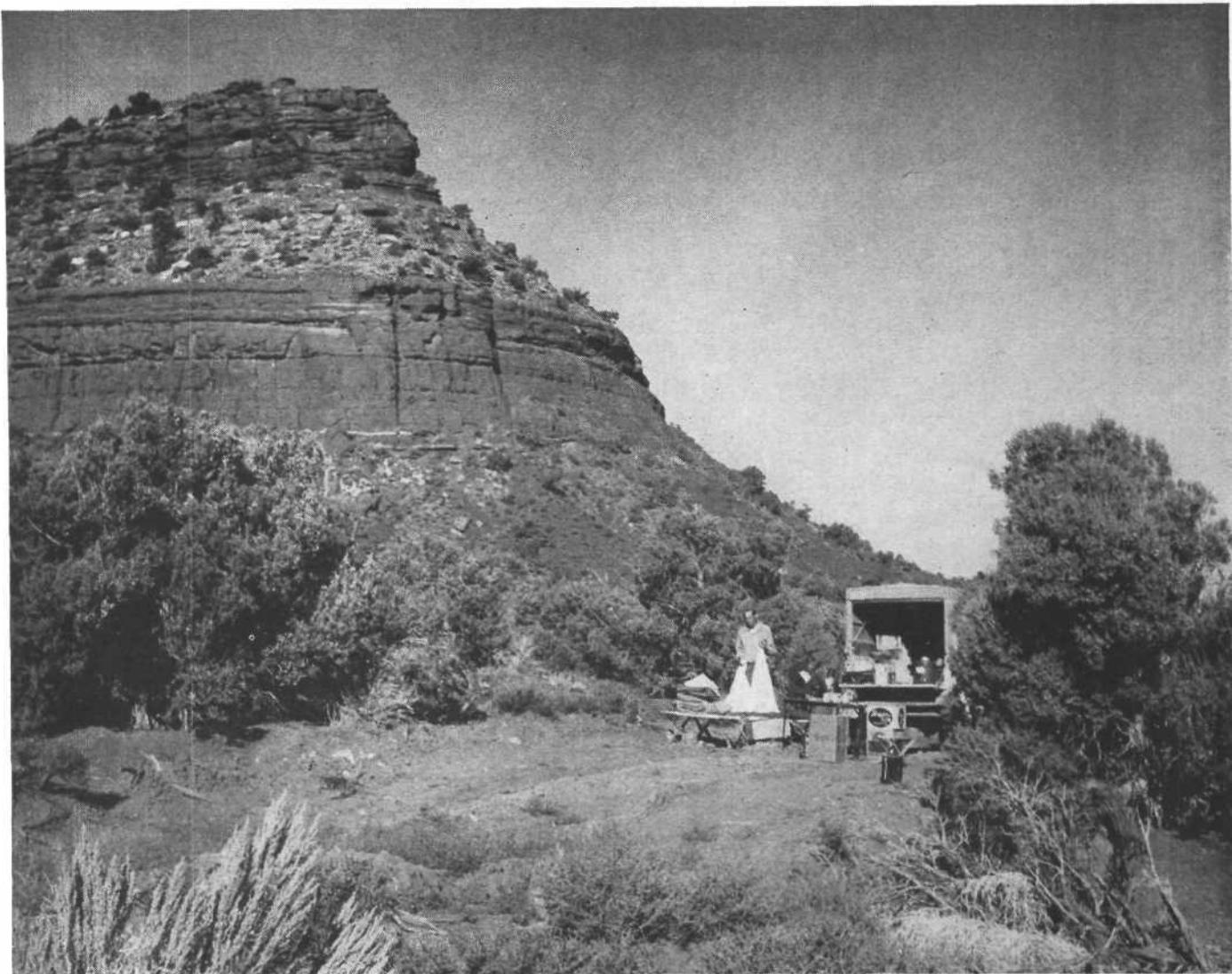
In 1906, 53 years after he had heard the Cahuilla's story on Travertine Point, Professor Blake, 80 years old and with hair and flowing beard pure white, stood again at the same spot. He came back to see the Colorado foaming through man-made levees to threaten the existence of the pioneer agricultural empire in the Imperial valley. He saw men fight with shovels. He saw the Southern Pacific pour trainloads of rock into the gaps where water rushed to form the Salton sea. Great newspapers around the world were covering the story. Quietly, Blake filled in the background story, reviewed his old report and amplified it with additional information which is still considered the basic text on Imperial county's geology.

From 1895, when he became professor of geology and mining at the University of Arizona and Director of the School of Mines, until his death in 1910, Professor Blake made his home in Tucson. His wife and companion of 50 years, the former Charlotte

Haven Lord of South Berwick, Maine, died in 1905, the year he became professor emeritus and geologist of the state of Arizona. His six children included Dr. Joseph A. Blake, prominent New York physician.

During the sunset years of his life, Professor Blake seasoned his early observations with the wisdom of long experience. His bright eyes and genial smile endeared him to students and associates. Gatherings at his home in the evenings became stimulating adventures for his admirers as the professor's clear ruddy face glowed with his own keen interest in what he was saying. One of the few personal descriptions of Blake was the memorial by R. W. Raymond, secretary of AIME, who wrote: "He told a fact as though he had only just discovered it and had an unusual capacity for delivering an oral abstract with grace, directness, and lucidity."

If a biographer of his day could have caught the solemn wisdom, the sly humor, and spirit of high adventure of this restless intellectual, William P. Blake, what a great story of peaceful conquest could have been left to us!



With their jeep pickup, the Weights camped at the base of the chocolate-colored cliffs near Rock Springs. Black petrified wood is scattered over these slopes and can be found in place in the Chinle clay behind the massive cliff in the background.

Black Wood in Utah's White Canyon . . .

On a camping trip into the juniper-clad sandstone canyon country of southeastern Utah, Harold Weight found a great area where black petrified wood is weathering out of the Chinle formations. Here is a story that will interest not only the rock collectors but also those who like to explore the little-known areas in the desert country.

By HAROLD O. WEIGHT

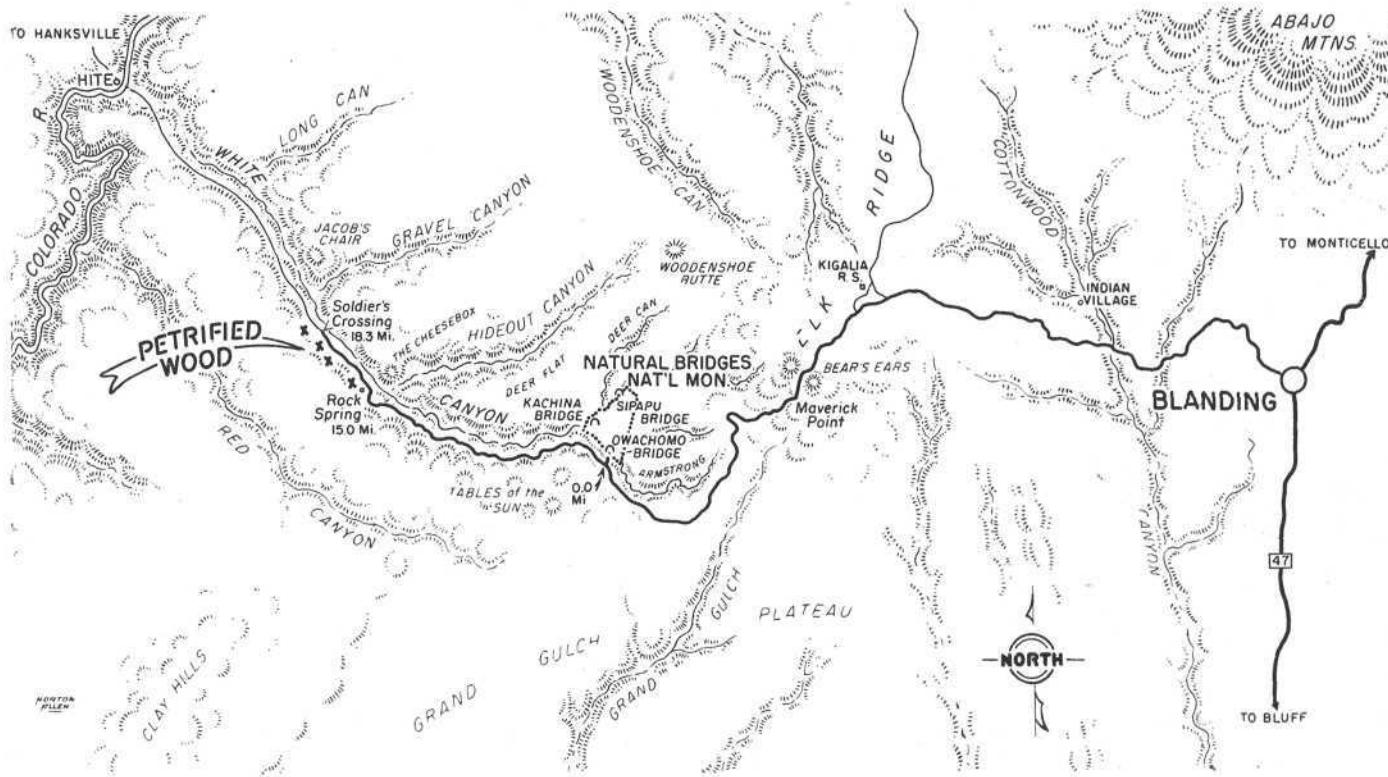
Photographs by the author

EVEN IN THE clear air of southern Utah, you can't see a beetle a mile away. So Lucile and I knew, as we looked down from Maverick Point, that the buzzing blue object far below must be an automobile climbing

the road we were on. Maverick Point is the spot where the road from Blanding to the Natural Bridges and Hite plunges in steep curves from the southern rim of Elk Ridge to the broken wilderness of Grand Gulch plateau. It is a place

where the world drops suddenly from under you. The panorama is tremendous; even in a land of overpowering vistas it has driven competent writers into an ecstasy of words.

Although there was a haze that autumn day, we could discern and identify the sharp-ridged Henry range, the far rounded bulk of Navajo mountain and—50 miles away against the southern skyline—the unreal fingers and minarets of Monument Valley. On all sides to the horizon stretched the vast little known and almost unin-



habited plateau wonderland of southeastern Utah.

But my attention was soon fixed in the west. Down there, light in color against the reddish plateau mass, was an intricate filigree of branches and tendrils, looking as if a part of the world's network of nerves might have been laid bare. That was White canyon—our destination. I knew that in reality those delicate traceries were sheer-walled gorges, some of them hundreds of feet deep, cut into the Permian sandstones by millenniums of erosion. And those shadowed canyons were the home of the great natural bridges, of ancient picturesque cave dwellings—and of black petrified wood.

Sometimes you need only look at a land to feel its fascination, and you sense a strange inexplicable kinship with it. Even from our eagle's viewpoint, I felt the fascination of White canyon. And it wasn't the anticipation of rocks to be hunted out. We hadn't driven to this isolated corner of Utah just to collect petrified wood. We came because we wanted to see the fabulous San Juan country. But Randall Henderson's report of the specimens to be found in White canyon (*Desert*, Oct. and Nov., '49) may have hastened our coming.

The blue car was well up the grade now, and the road down there looked very slender. We decided to wait where we were. When it had come around the last curve and past us, I started down. It's a good road, even if it does look a little like the last big dive on

a rollercoaster. But we were glad that we had been polite. While there are places on the grade where two cars could pass without scraping, there are longer stretches where they couldn't. And in any head-on meet, the car coming up would have the right-of-way. Not that I can't back up a mountain if I have to, but my ideas of fun have changed since high school jalopy days.

The San Juan country is definitely road-resistant. From above its plateaus usually have a deceptively smooth appearance. But try to cross them directly, even on foot, and you will find there are more up and down than horizontal yards in almost every mile. Erosion has licked out canyon-tongues everywhere, and with the cliff-forming tendencies of the weathering sandstones, most of the up and down is very steep.

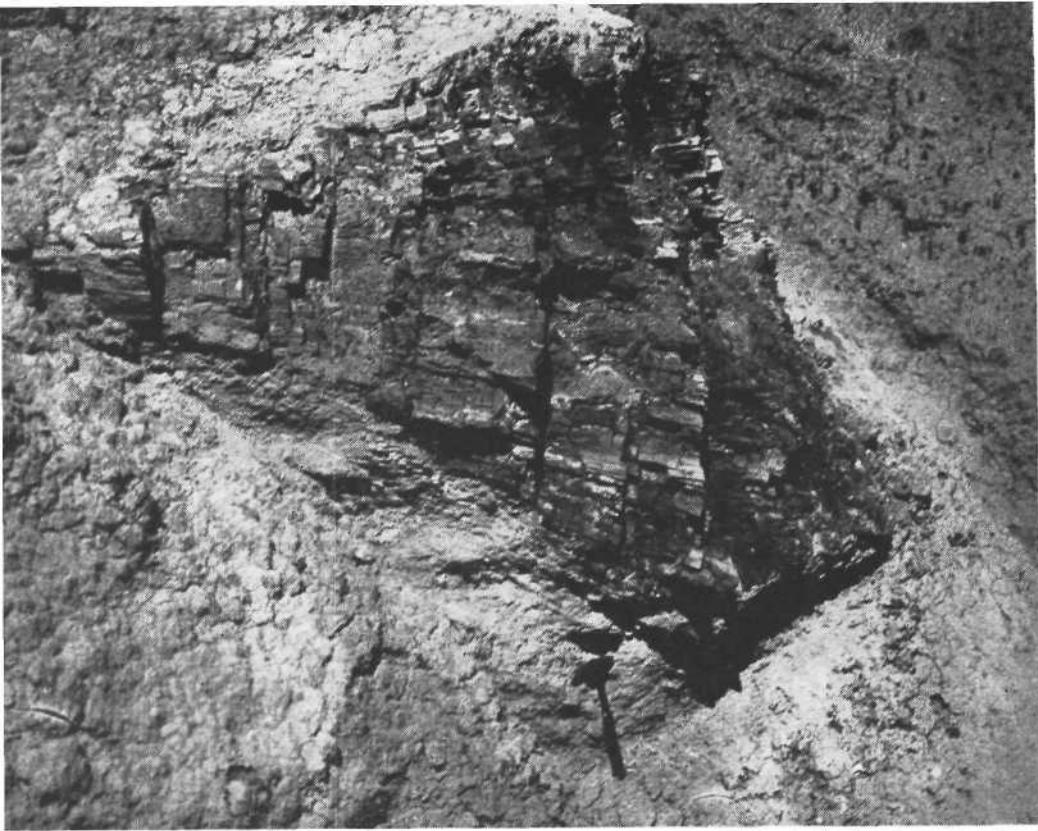
It adds up to a country beautiful to the eye but difficult to tame. Much of it will always remain wilderness because it would not be profitable to thread it with roads. For that we can be thankful, but we should be no less thankful for the limited number of access roads being worked into it. Those who cannot afford the expense of pack trips or the time required to make them, often need the peace of our wilderness areas even more than those who can.

Indicating the resistance of the plateaus to road-building, Natural Bridges National Monument was set aside in 1908, but not until 1928 was an acceptable automobile road extended to

it. Part of our route followed the trail of Mormon pioneers of 1879-80 who founded Bluff. Not even this savage land could stop these people who brought wagons and supplies on an incredible march from Escalante, cutting their way down through Hole-in-the-Rock, fording the Colorado and conquering the plateau cliffs in a trek unmatched in pioneer history. (*Desert*, May, '47). At 6.5 miles from Maverick Point we passed a wooden sign marking the point where this long-abandoned Hole-in-the-Rock trail winds southerly into the Clay hills.

We reached the place where the Natural Bridges road branches northward to the edge of Armstrong canyon, 9.6 miles from Maverick Point. Until recently, the Monument headquarters was the end of tourist automobile travel in this area. Then the road was carried on down White canyon to the Colorado river opposite Hite, a spot known as Dandy Crossing in the early days. When a ferry was put into summer operation at the crossing (*Desert*, February, '47) it became possible for adventurous motorists to drive through from Blanding to Capitol Reef National Monument and western Utah.

The state has put up a sign where the Hite road joins that to Natural Bridges. Motorists—desert veterans and beginners—are not likely to become involved in dangerous troubles if they adhere to the advice on this sign. Summed briefly, it advises driving at reasonable speeds; carrying ample water, gas and oil; use of low



Above—This crumpling outcrop is a huge log of petrified wood in place in the Chinle formation above Rock Springs. Size is indicated by the prospector's hammer below. The fossil wood is black.

Below—Along the trail into White canyon at Soldiers Crossing Lucile found a miniature natural bridge resembling Owachomo bridge opposite the headquarters in the National Monument.

gear on grades; low or second gear in sandy areas and no stopping in sand; sounding of horns on curves and dugways; no parking in washes and stopping only on high ground.

We zeroed the speedometer at this sign and headed on west. Travelers who turn back after visiting Monument headquarters will have no real conception of the beauty and grandeur

of White canyon. They also will miss a new road which has been cut to within about a quarter-mile of Katchina bridge. This auto-trail cuts off to the right 3.1 miles west of the road junction. It joins a foot trail, marked by painted lines on the sandstone, which leads down a promontory to the spot where Katchina arches across White canyon at its junction with Armstrong. Before the new trail was laid out, it was necessary to hike or ride horseback three miles to glimpse this massive and beautiful stone bridge.

The scenery became more colorful and spectacular as we continued westward. The road dipped and curved around the bases of great reddish cliffs. Ahead we could see a broad valley, spotted with the green of juniper and pinyon. Its north wall was a massive chocolate-red cliff, topped here and there with picturesque buttes. Its south wall was an even higher series of double cliffs. Down the center of the valley, glimpsed now and then in all its awesome depth and breadth, was the twisting inner gorge of White canyon.

For this is a canyon within a canyon, and the story of its creation is an interesting one. The history of the world—even that of its human inhabitants—seems to be a constant building up and tearing down, over and over. So it was here. After the great layered plateau had been built and elevated, the process was reversed. Streams of water cut down through the buff and red Wingate, through the clays and marls of the Chinle and the shales of the Moencopie. Cliffs formed as sections of the Wingate broke away. The Chinle collapsed into mounds, forming a step. The Moencopie, more resistant, weathered into a series of cliffs and steep slopes.

By the time the water was cutting through the bottom of the Moencopie formation, it was an old stream in an old valley. It had reduced its own grade until it was sluggish, and it looped from side to side in the broad valley it had worn away. As it cut slowly into the harder and underlying sandstone of the Permian age, it still followed the broad loops and meanders of its course. Then something happened. Probably the whole plateau was elevated again. Perhaps it rose slowly—perhaps swiftly. The renewed grade caused the stream to run faster and cut deeper. But the course it must follow was already cut into the hard sandstone. The rushing waters were confined to a winding channel. They could widen it, especially at the bends, but straightening it was a long, slow process.

Most of the natural bridges of the

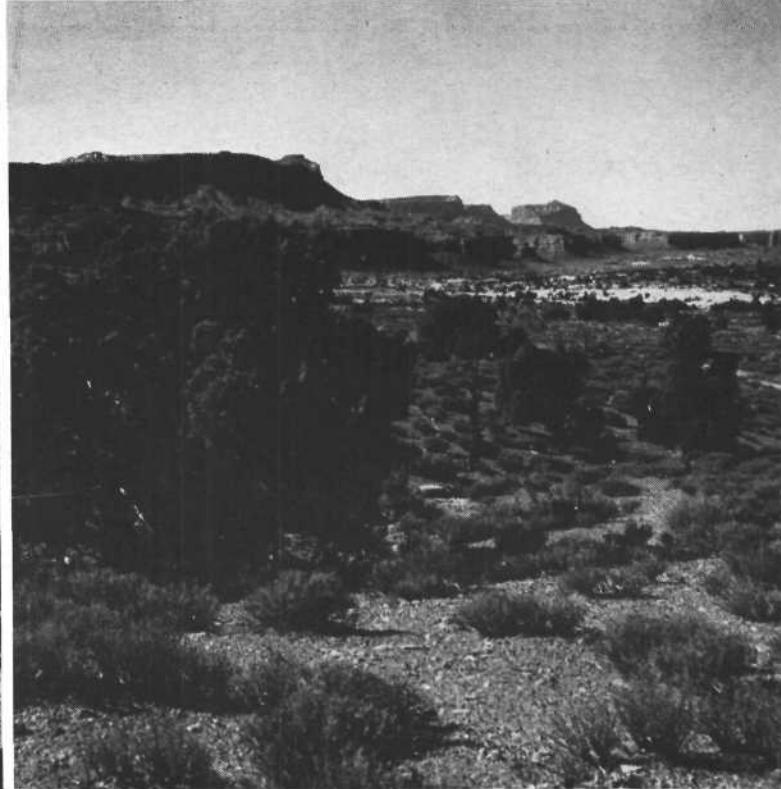


View across White canyon from Cliff-dweller's niche at Soldiers Crossing. The butte in the center is Jacob's chair, and the talus slopes below the vertical walls are Chinle formation carrying petrified wood.

area came into existence as part of the straightening program. When great floods of abrasive-filled water poured around the loops, they naturally gouged more into the outer banks on each bend. And where two bends formed a narrow neck, the water in time cut a tunnel through. The stream, taking the newer, straighter channel, would widen it rapidly—but the capping sandstone or bridge over the stream would remain untouched so long as it could carry its own weight.

Many visitors do not comprehend the tremendous destructive power of flood waters in the plateau land. Campers cannot be warned too often against the danger of camping in the possible path of a flash flood. Everyone has sense enough to stay out of washes during a general storm. But too many fail to realize the connection between the dry, pleasant wash where they stop and a black thunder-head sitting atop a mesa or ridge miles away. Once they have seen a flash flood come rolling from nowhere, filling the canyon from wall to wall or plunging from what a moment before was a dry cliff, no future reminders are needed. Those who would like to see what grit-filled water can do to sandstone might pause for a moment at 12.6 miles to look at the astonishingly deep and narrow little channel crossed there by a short wooden bridge.

Our tentative goal was a spot along White canyon known as Soldiers Crossing, which offered easy access to the inner gorge. But we didn't make it



Looking down White canyon between Natural Bridges and Hite. Petrified wood is found in the Chinle formation between the upper and lower cliffs in the left background. Juniper trees are in the foreground.

the first night. Our guide for the trip was Herbert E. Gregory's *The San Juan Country*. Near a watering place he called Rock Spring, Gregory described a great 500-foot high outcrop of Chinle formation containing petrified wood, and we were looking for that. The road had not been there when Gregory was in the country, but we figured the approximate mileage. And when Lucile caught sight of a sign by the road bearing the legend "Drinking Water" and pointing toward the main canyon, we suspected we were near Rock Spring. The suspicion was confirmed when, looking up through a V in the big cliffs to the south, we saw fluffy mounds banded in pinks, reds, purples, greens, browns and greys—the familiar markings of the Chinle.

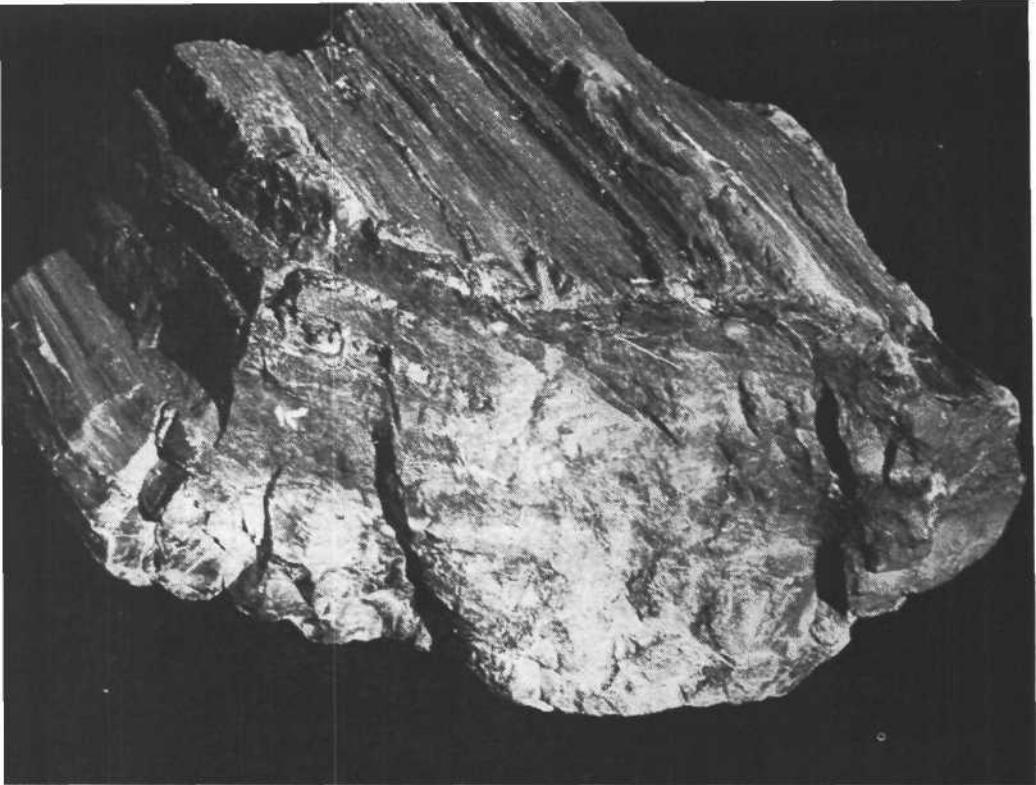
So we backtracked to a bit of abandoned road among the junipers near the base of the chocolate-colored cliffs, and pulled out to camp. Dusk was closing in, but before setting up camp I wanted to check to see if any of the petrified wood had reached the slopes where we were halted. Within 100 yards of camp I found, half buried in the bank of a small wash, one sizeable piece which looked greenish on the outside. The second one was almost bone white in outward appearance; the third that I found was black. It looked as if there would be some variety in this field. But when I hauled my finds back to camp and chipped the weathered coating, the interior of all three pieces proved to be black. It was possible to trace the grain of the wood in most pieces, which would add attractiveness

to the cut material, and a large percentage was of a good enough replacement to polish.

In the morning I decided to attempt to climb the Chinle exposure and see if the wood was more abundant there and if there were any other colors. Lucile thought she would rather investigate the coves at the cliff base. Before I finally reached the huge clay outcrop, I had learned that I wasn't much of a cliff climber. But I found many large pieces in place—and one huge log, at least six feet in diameter, made the strenuous exercise worth while. I didn't find much variety of replacement, although there was some two-toned brown material among the more abundant black.

But the lack of variety didn't greatly bother me. Petrified wood is my special favorite among all the collecting rocks. Palm root and redwood, gorgeously jasperized and opalized chips and the plain brown limbs of our southern deserts—they all have a place in my affections. I know that some advanced rock-hounds look down their collecting noses at petrified wood. I believe the complaint is that it is too common. But I know of no other rock so infinite in variety. And each piece is a token from the past with a history so fantastic that it is beyond the power of our imagination to grasp it fully.

With my collecting sack loaded, the trip back to the car was more difficult than the climb up. The rocks shifted my center of balance and the additional weight made me slip on the steeper slopes. To shorten the trail, I decided



Above—Chunk of White canyon petrified wood. This piece, about 18 inches in diameter is a mixture of black and brownish black, and shows the grain clearly.

Below—Drivers taking the road to the ferry crossing over the Colorado river at Hite will do well to heed the advice given on this sign.

to follow down directly from the Chinle to the valley floor. And when I found myself staring down a vertical 50-foot fall over the rim of the Moencopie cliffs, I realized again that it is wisest

to return by a route that had at least proven passable.

When I finally reached the car, Lucile had not been idle. Her wood collection proved that plenty can be found

without the climb to the factory. But the best piece, she insisted, was still to be seen. "I dragged it to the edge of the road," she explained, "because that was closer."

As we drove on toward Soldiers Crossing, Lucile watched the side of the road for markers she had left. At last she told me to stop. We climbed the bank. There at the edge of the road was by far the best specimen of wood from the area that I had seen—a little item about one and a half feet square. I wrapped my arms around it and lifted it tentatively and grunted.

"You dragged this here?" I asked.

"Well, you couldn't expect me to leave it behind could you?" she demanded indignantly. Lucile likes petrified wood too. And with her moral encouragement I hoisted the prize into the pickup and we drove on.

Soldiers Crossing, which we reached at 18.3 miles, was named for the grave of two soldiers. The grave is fenced today and has a headstone and footstone, but there is no legible lettering on either. From an article by W. W. Dyer, published 46 years ago and detailing the story of the first regular expedition to the Natural Bridges, we know that a sandstone marker there in 1902 carried the facts.

The two soldiers, named Worthington and Higginson, were regulars in the United States army, killed in some forgotten skirmish with the Ute Indians. They had been buried by F. M. Chandler, March 30, 1885.

While I photographed the soldiers' grave, Lucile hiked on down the old road into the canyon. Later when I followed she was nowhere to be seen. Wondering how many mountain lions lived in that part of the country and how hungry they were in September, I started to whistle and call. Finally her voice came from behind me.

"Look!" she said. "A miniature Owachomo!" She was on the canyon slope above the trail, perched on a narrow bridge of sandstone which arched over a little ravine. It was in truth an almost perfect small edition of the great natural stone bridge at Monument headquarters.

"And that's not all," she said excitedly, joining me on the trail. "I've found a cliff-dwellers cave, with pictographs and grinding stone and manos and arrow chippings." She led me to the shallow niche in the southwest wall near the canyon bottom. It was a choice location, I should imagine, protected from the weather by a broad overhanging ledge and a great gnarled pinyon. There was a mudhole in front of it which must have held water a good part of the year. Flowers bloomed

against the canyon slopes—clematis, paintbrush, goldenrod, asters and others. And the view was superb.

The pictographs were on the back wall, chiefly circle patterns, with red, black and white clays or stains still easily discernible. The grinding stone was near the front of the cave, with three hollows worn into it. Both it and the mano on the ground below were of sandstone. I was surprised that, with harder material in the canyon a few feet away, the vanished dwellers had used such a soft rock. Maybe it was a case of: "Grandmother Eagle Feather used sandstone and what was good enough for her is good enough for me!" Or maybe they fancied sand as a sort of seasoning for their corn-meal or ground pinyon nuts.

Leaving the cave, we spent some time hunting rocks in the stream pebbles of the canyon bottom, finding petrified wood, a little jasper and several pieces of splotched reddish agate which should cut. But we kept returning to the cave and to other shallow niches in the area which showed signs of ancient habitation.

There are many such places in White canyon and particularly in its upper tributaries. Many are big community affairs, with walls and apartments. Pottery shards in other places tell of vanished villages. It is difficult to realize that long ago the population of the San Juan country probably was greater than it is today. The area seems to have been a center for the Basket-makers and the Cave-dwellers. Then, as throughout so much of our Southwest, these people left their homes and went away, or the race died out or it was destroyed by war or disease. No one yet knows what happened.

The long shadows from the canyon walls warned us that we must leave. Reluctantly—there never is enough time to do all the exploring we want—we started to climb the old road to the upper valley. But before we had gone more than a few steps, Lucile stopped decisively and turned for a last look at the little cave.

"It must have been a perfect home for them," she said. "How could they bear to leave it?"

Her words brought me into a sudden realization of our fellowship with the lost people of the plateau. Did some brown-skinned woman, shouldering the family belongings, look back from this spot centuries ago—and weep? For although we think we are far superior to the primitive ones who lived here, the human heart has changed but little. A home was a home then, too.

High overhead a silver transport plane winged across the blue of the sky. The sound of its motors echoed briefly back and forth between the canyon walls and died away as the plane passed and the sky was empty again. And I realized the great charm of this White canyon country. Time has been asleep here.

The outer world has shaken with war and revolution. The United States has grown from nothing to giant stature. Pioneers have passed, to the north and south, and have altered the face of the West. Man has climbed from the mental darkness of the Middle Ages to the moral darkness of the Twentieth century and now is perched precariously between a future that promises earthly paradise and one which guarantees self-destruction.

And all this has made no more impression on the White canyon country than the echoes of that vanished plane against the canyon walls. Here it really was only yesterday that the Cliff-dwellers left their homes and entered the unknown. Here it will scarcely be tomorrow when either the last man vanishes from the face of the earth or mankind, united, turns toward the light.

Lucile looked up at me. "You know what?" she said. "We've got to come back here when we've oodles of time. And you know what? Maybe you'll think I'm foolish—but I'd like to spend a night in that little cave."

Yes, I think we'll go back. We have all the White canyon petrified wood that we want—but I doubt if we will ever have enough of White canyon.

ANSWERS TO DESERT QUIZ

Questions are on page 9.

- 1—Shovel.
- 2—Navajo.
- 3—Rock-climber.
- 4—Cottonwood.
- 5—New Mexico.
- 6—Zion National park.
- 7—Coronado Trail.
- 8—Near Yuma, Arizona.
- 9—Quartz.
- 10—Pottery.
- 11—Salt River.
- 12—Tamarisk.
- 13—Writer.
- 14—San Gorgonio.
- 15—Notorious outlaw.
- 16—Cahuillas.
- 17—Wickenburg, Arizona.
- 18—Smoke tree.
- 19—Papagos.
- 20—Utah.

Hard Rock Shorty of Death Valley



The thermometer hanging under the lean-to porch in front of Inferno store registered 122 degrees. The new clerk who had just arrived from the coast the week before sauntered out and looked at the mercury and then rushed back into the store.

"Hope I can stand this heat," he gasped.

"Aw, this heat won't hurt yuh," remarked Hard Rock Shorty as he glanced up from the month-old newspaper he was reading.

"It'll get a lot hotter'n this in August."

"How high does the temperature really go in Death Valley?"

"Nobody knows," said Shorty. "Got so hot one summer the thermometer melted. Last readin' we had was 140 degrees."

"That was the summer I nearly lost my partner, Pisgah Bill. Happened this way. Bill'd gone up the valley to get some mesquite fence posts fer that chicken yard he wuz buildin'."

"Comin' home he cut across the dunes. About half way across he thought the sand wuz feelin' kinda funny, and he looked down an' saw the stuff wuz meltin' right under his feet. Soon he wuz wadin' up to his knees in that melted sand, and it kept gettin' hotter."

"Looked pretty bad for Pisgah. He'd lived on the desert so long he'd never learned to swim. So he stopped the burro, unloaded them logs and lashed 'em together with the pack ropes an' made 'im a raft, big enough fer him an' the burro. Got it finished just in time to keep from drownin'."

"Him an' that burro floated around out there in that lake o' melted sand fer three days with nuthin' to eat. Then the weather changed an' it turned cool an' the sand got hard again. Bill wuz pretty weak, an' if he hadn't found a jack-rabbit that'd got its feet caught in that solidifyin' sand an' couldn't run, he'd a starved to death."



The native willow of the desert is really a catalpa. It is found only in the arroyos. This photograph taken by George Roy.

OLD FLIRT

By ADELAIDE COKER
Los Angeles, California
(Conversation With A Donkey)

Dozing in the sun was a charming fellow,
And his happy snoring was deep and mellow.
I gently tweaked his long tan ear,
And whispered softly, "Now listen here,
Wake up and tell me where you have been,
What you have done, and what you have seen!"
He just stood there in his desert stall;
I thought he hadn't heard me call.
Then he switched his tail, (and this I did see.)
He opened one eye and winked at me!

A WOMAN STILL

By ELIZABETH MOORE TRACY
Long Beach, California

The desert wind is a harridan,
Shrivelled and brown and old.
Her banshee shriek in the dead of night
Would freeze the blood of the bold.
She stumbles along in her billowing rags
Her thin hair streaming down,
Muttering curses and chanting spells
On the new-born desert town.

The desert wind is a wicked witch,
Yet once I saw her pass
Tenderly over a fragile nest
Couched in dry desert grass.

She hurls the sharp-edged granite sand,
Gnashing her teeth in rage;
Yet a thistle's fluff is her powder puff
And she perfumes her breast with sage.

Beyond the Road

By LOIS ELDER ROY
Palm Desert, California

I have seen Catalpas
Lashed by knotted roots
To boulders strewn;
A bulwark formed
To push aside the churning floods
That crowd the age-old highways
Of a desert wash.

I have seen Catalpas—
Gnarled and twisted boles
Like human forms;
Benign old hands
Outspread, to gather in the sheen
Of purple haze that filters down
Into its pulsing heart.

I have seen white magic
Fused in fairy light;
Soft, whispered winds
Shake elfin music
From the tinted bells that merge
Into the moonglow radiance
Of a desert night.

I know, now, that heaven
Lies beyond the road
And clamorous day.
This silent realm
Sun-seared and charred, God called
His own. I saw Him in the moonglow
Where Catalpas bloomed.

NUGGET

By RUBY CLEMENS SHAFT
Arlington, California

Dull brown of sand dunes,
Bright blue of sky,
Gray green of sage brush,
Clouds floating by.

A little lone hut
Wide open door—
The hope that sang high
In a nugget of ore.

Skillet all rusty,
Coffee pot black—
So-long little hut,
Don't look for me back.

DESERT HEALING

By MURRAY SKINNER
Los Angeles, California

A stranger in a foreign land, one came
To view the desert with dyspeptic eye.
Its brown monotony seemed dull and tame,
And ugly underneath a winter sky,
With cold harsh winds, and dark clouds
drifting by.

A victim of the city's stormy ways,
One sat, alone; breathing the desert air,
Watching spring's still advance through
changing days . . .
Thus, gravely grew to think the desert fair,
To see the desert's lure and feel its dare.

Then, suddenly, like a blast of trumpet note,
This desert bloomed in rainbow-hued design,
Bringing a swift, heart-choking to the throat
As flowers spread to the far mountain's
line . . .
Now city-mind found desert lands divine!

DESERT SUNSET

By MYRTLE M. PEPPER
Los Angeles, California

When sunset bathes the gorge in gold,
All of the brilliant colors hold
Me in a maze of strange delights—
Fabulous days and mystic nights.

Love

By TANYA SOUTH

Love holds a torch to all on earth:
To rich and poor, to those of worth
Or sinners all. How vast and far
Its influence! No soul can bar
Love from its inmost core, nor fight
Successfully against its might.

All evils can it overcome.
Though grim and hard the Path we
tread,
And doubtful issues wait ahead,
Love is the substance and the sum.

Her Canvases Are Windows

Marjorie Tietjens began her art career in Europe. Later she made a new start in New York. Then circumstances brought her to the New Mexico desert—and now she has found a fascinating new field for her creative talent—in the forms and colors and moods of the desert landscape. If you see her at her easel along the roadside sometime you'll know her by her silver-gray hair, her kindly smile and her British accent.

By THERON MARCOS TRUMBO

ONE DAY, not so long ago, my family and I were speeding along Highway 80 between Deming and Las Cruces, New Mexico. Warm sunshine flamed on the vermillion sands. Heat waves sent the enchanted buttes on the distant horizon into a shimmering dance. The desert was at its best, but none of the speeding motorists in the cars appreciated the glorious world about them. Each was going at top speed . . . except the car ahead of us!



Marjorie Tietjens' workshop is the New Mexico desert.

It was a decrepit vehicle of doubtful vintage and ancestry, with an out-of-state license plate. Impatiently I pulled up close behind, waiting a chance to slip around.

Suddenly the driver of the car ahead lunged at his brake-pedal. The tires screeched and the car lurched to a stop. Only by lucky maneuvering did I avoid a crash.

Naturally, I was somewhat disgruntled. I pulled to the side of the road, and got out of my car.

Then I saw the apparent reason for the other driver's abruptness. A woman sat beside the road, busily dabbing at a canvas propped on an old easel. The inquisitive fingers of the desert wind ruffled strands of silver-gray hair about her sun-browned face. When she threw us a startled glance, I saw that her soft eyes were gray also, and kindly.

The man was humble and most apologetic.

"I never seed a real, live artist before," he explained to everyone in general.

An artist painting by the roadside is not such an unusual sight in New Mexico. It was only when the lady spoke with a decided English accent that I grew interested. I'm always curious to know what it is that brings people halfway around the globe to our particular patch of parched and desolate earth! I glanced hurriedly at her picture . . . stopped short . . . and took another look. Then I really was interested. Here was no ordinary dabbler in paints. The beautiful desert vista gradually forming on her canvas was the work of an accomplished artist!

The fairy-tale revelation came later when Louise and I interviewed Marjorie Richardson Tietjens in her quaint little studio apartment just outside of Las Cruces. The strange thread of circumstances which brought this English-woman from the snug security of the British Isles to the expansive freedom of the desert is truly fantastic.

"It's all quite interesting," she assured us with an expressive gesture. "I was born in New York, and at an early age was taken to England. My father was the European representative of an American firm. His work kept him shuttling back and forth across the Atlantic, but I wasn't allowed to visit America until I was grown.

"My father had a fear that I would fall in love with an American and leave home," she told us with a chuckle. "Finally, I found a chance to cross as the companion to a girl. I quickly got my clothes ready, bought my ticket, and then told my father I was going. He was a good sport. He said that I was just a chip off the old block, and I did get my trip to New York!"

In spite of his apprehension, it was his stories that eventually led Marjorie to the colorful desert country. The firm her father was connected with was financed from a New Mexican mine. Often, as father and daughter rode through the trim English lanes, he entertained her with the strange story surrounding the mine.

It seems that an Englishman, in New Mexico for his health, was out hunting deer one day in the mountains near Silver City. After wandering far into the forested peaks, he finally shot at a buck, but succeeded only in wounding it. Determined not to lose it, he began tracking it. The trail left by the wounded animal eventually led into a narrow box canyon. There the Englishman found something that made him lose all interest in the buck. It was a seam of ore shining in the sun. He picked up a lump of the mineral and hurried back to Silver City. At the trading post, he threw down the lump of ore on the table and remarked to the trader, "There's a whole mountain of gold where I was today. It's yours if you want it. It won't do me any good, because I have no family or friends, and I'll probably be dead within the year anyway . . ."

The trader looked carefully at the ore. It wasn't gold, but it was almost pure copper. He grubstaked the Englishman and upon his death came into possession of the valuable mine. This was the fortune that indirectly supported Marjorie's family.

When I asked Mrs. Tietjens about her earliest display of artistic ability, she recalled an incident that happened when she was hardly more than five years old. She and her elder brother were given the task of drawing a highly ornamented fish-knife, while the governess left the room. When the governess returned, Marjorie's sketch was so well drawn that she was accused of having her brother draw it for her.

"I don't think I'll ever quite forgive that governess," Marjorie told us, "I was furious about it!"

At twelve, she entered the Royal Drawing Society, a sort of educational experiment. Children were sent to the Society whether they showed any artistic promise or not, on the theory that self-expression would develop their personalities more fully. The instructors were all excellent artists in their own rights, and the Society did much to encourage artists. "Among the famous English artists of today," Mrs. Tietjens informed us, "I've noticed that many trace their early training back to the old Royal Drawing Society."

At this school, Marjorie quickly became a star pupil, and took many prizes and medals for her work.

The next stage in Marjorie's life was as romantic as every artist's life should be. She went to Rome to study in the British Academy, and there she was fated to meet Paul Tietjens from St. Louis, Missouri. He was a musician, noted for composing the lilting musical score of the original opera, "The Wizard of Oz." They were married, and for four years their life together was an idyll of happiness. They followed the gypsy trails of Europe from Italy to sunny France, from England to gay Vienna.

A tiny echo of nostalgia crept into Marjorie's husky voice as she told us about those years together. "We didn't have so much in the way of material possessions, but they were the happiest years of my life!"

While Marjorie painted, Paul accompanied her with his inspiring music. In England, where her success came quickly, her pictures were hung in many important competitive shows. There, too, she gained a nation-wide reputation for her lovely flower arrangements, which were lithographed for popular enjoyment. "When I went back to England later, I still found prints of those pictures for sale in the stores . . .," she said.

Those were indeed halcyon days. But as in every fairy tale, there must be a witch, working an evil spell. The depression came. For Paul and Marjorie the gay, carefree life was over. They decided their rainbow might still be shining across the Atlantic. At least conditions seemed better in America than in Europe, so they moved to New York.

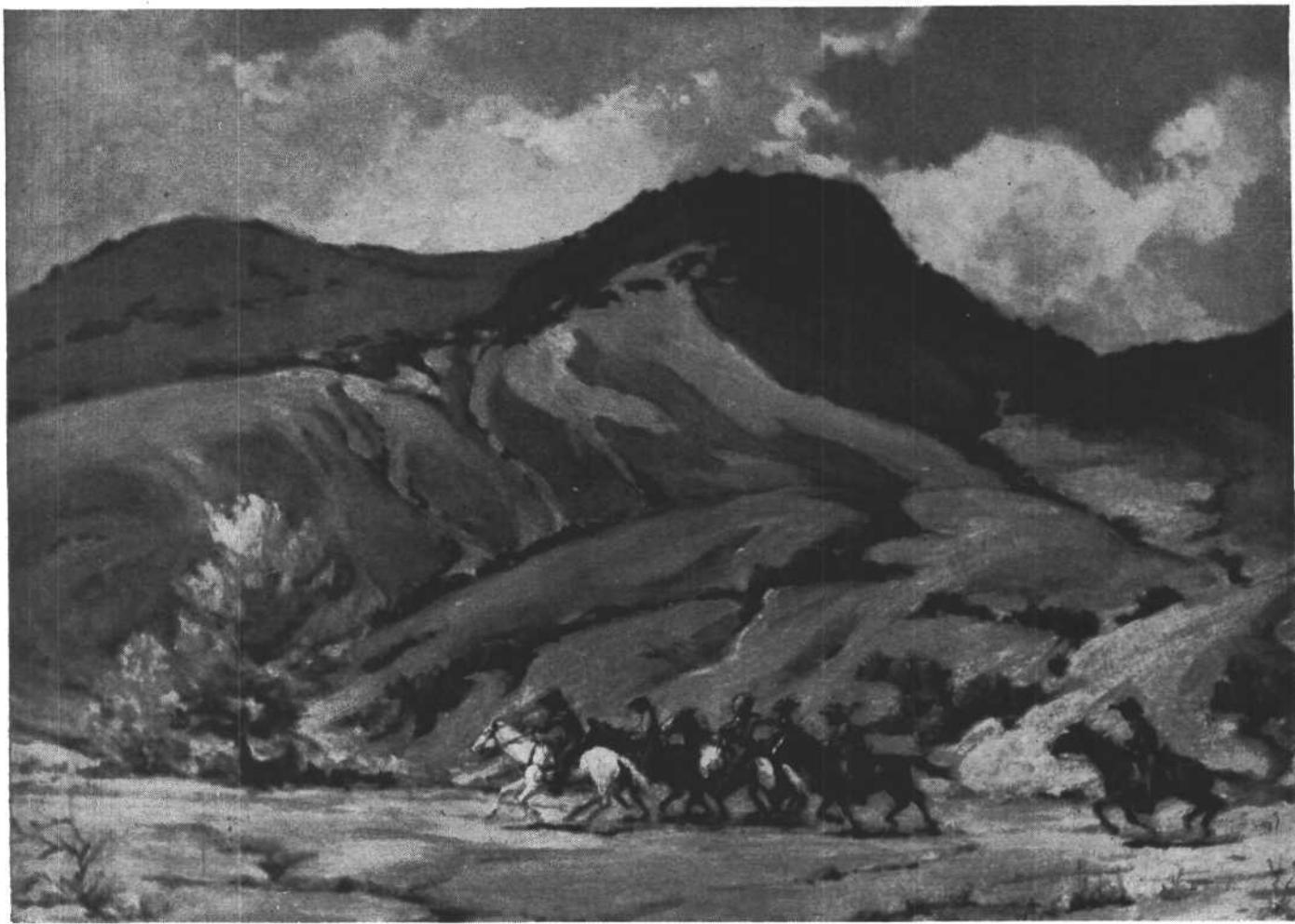
Marjorie now had to make a new start. She turned to portraiture, and by steady endeavor soon built up a good connection for her work.

And then, when everything was looking brighter, Paul became ill. Soon he was a complete invalid. His illness stretched into long, long months, and Marjorie was forced to give up her painting to care for him.

Finally, one day, she found herself alone . . . The rainbow of happiness wasn't in New York at all . . .

But after shadow always comes sunshine. With typical western hospitality, Paul's New Mexican cousins invited Marjorie to come and recuperate in the desert sunshine. Thus the thread of fate wove its complete pattern.

As she drove up the Rio Grande valley from El Paso to Las Cruces, the long thoughts of childhood returned to her. These mountains were not strange, but familiar, for they had been waiting for her all these years. The sunbaked adobe houses warmed her heart. After her sojourn in Italy, even the Latin tongue sounded sweet to her. There



Halftone reproduction of Marjorie Tietjens' "Broomtails—Mimbres Rodeo."

was a peacefulness here in the land of the sun that took the edge from her sorrow and brought back hope.

Most artists drift to the northern part of the state with its pleasant summer climate and its Indian subjects. But Marjorie was thrilled by this desert country. The long vistas of shimmering sand and mesquite were waiting to be painted. The enchanted turquoise outlines of desert mountains were begging to be included. Soon she had her paints out and was at it again!

And so Marjorie Tietjens has made another start, just as she has started before in Europe and again in New York. Truly, talent knows no defeat!

Now, wherever she goes, she makes dozens of sketches, sometimes in pencil, sometimes in oil-colors. From these she composes her pictures in the studio. Contrary to modern theories concerning retouching, she works on her canvases until they satisfy her.

"The whole trick," she says, "is in knowing just where and when to stop. I think I've spent more time studying the skies than anything else. These desert skies are so elusive. In Italy the skies are soft, shading into lilac or mauve at the horizon, but here the

brilliant turquoise shades into green and saffron."

She is particularly interested in the life of the cowboy and his mounts on the cattle ranches that dot the lower foothills of the mountains. I commented on the fact that her pictures are not merely beautiful scenes . . . that each one of them tells some vivid, interesting story.

"People like animals in landscapes," she explained. "And as for me, I just can't keep them out. I especially love to paint horses. I'm planning now on spending some time on a cattle ranch near Hatchita where I want to paint the different stages of the roundup."

The reality and movement of her cowboy scenes against desert backgrounds is most gratifying. She also has the rare ability to capture the great distances of the southwest. Her canvases are windows through which your eyes can actually travel out across the leagues of sunlit sand.

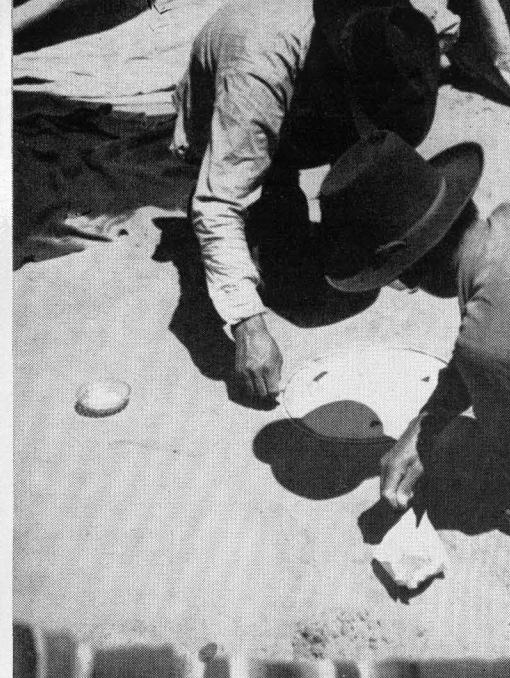
If, someday, you are travelling a rain-washed, lonesome trail and suddenly come upon a lady with silver-gray hair, busily capturing an intriguing scene, don't be astonished if she speaks to you with England in her

voice. It will be Marjorie Richardson Tietjens recording another bit of our enchanted desert land to thrill some stranger who had passed the same scene with an unseeing eye!

• • •

EXPLORING EXPEDITION IS BEING ORGANIZED

Charles Larabee and Harry Aleson of Richfield, Utah, are making tentative plans to guide an exploring party on a 90 to 125-mile trip down an unsurveyed sector of the Escalante river in southeastern Utah during the summer. Pilot runs were made in 1948 and 1949. The 1950 party expects to carry mountaineering equipment to enter and photograph a number of Indian cliff dwellings that have been inaccessible to previous explorers. No excavating will be done. According to Aleson the journey will include visits to several little-known natural arches and bridges estimated to exceed 800 feet in height. As the party has not been completed yet Aleson stated that he and his associate will correspond with men qualified for a rugged outing who are interested in joining them.



1 Preparations for the healing chant actually begin with the grinding of the pigments for the sand painting. Soft mineralized rock of various shades and charcoal are brought in—sometimes from long distances—and ground with mano and metate.

2 Working from the center out, the medicine men, relatives of the patient, begin laying down the pigments held in the palm and allowed to trickle down the body, using the flexed index finger.

Healing Ceremonial in Monument Valley

By RANDALL HENDERSON

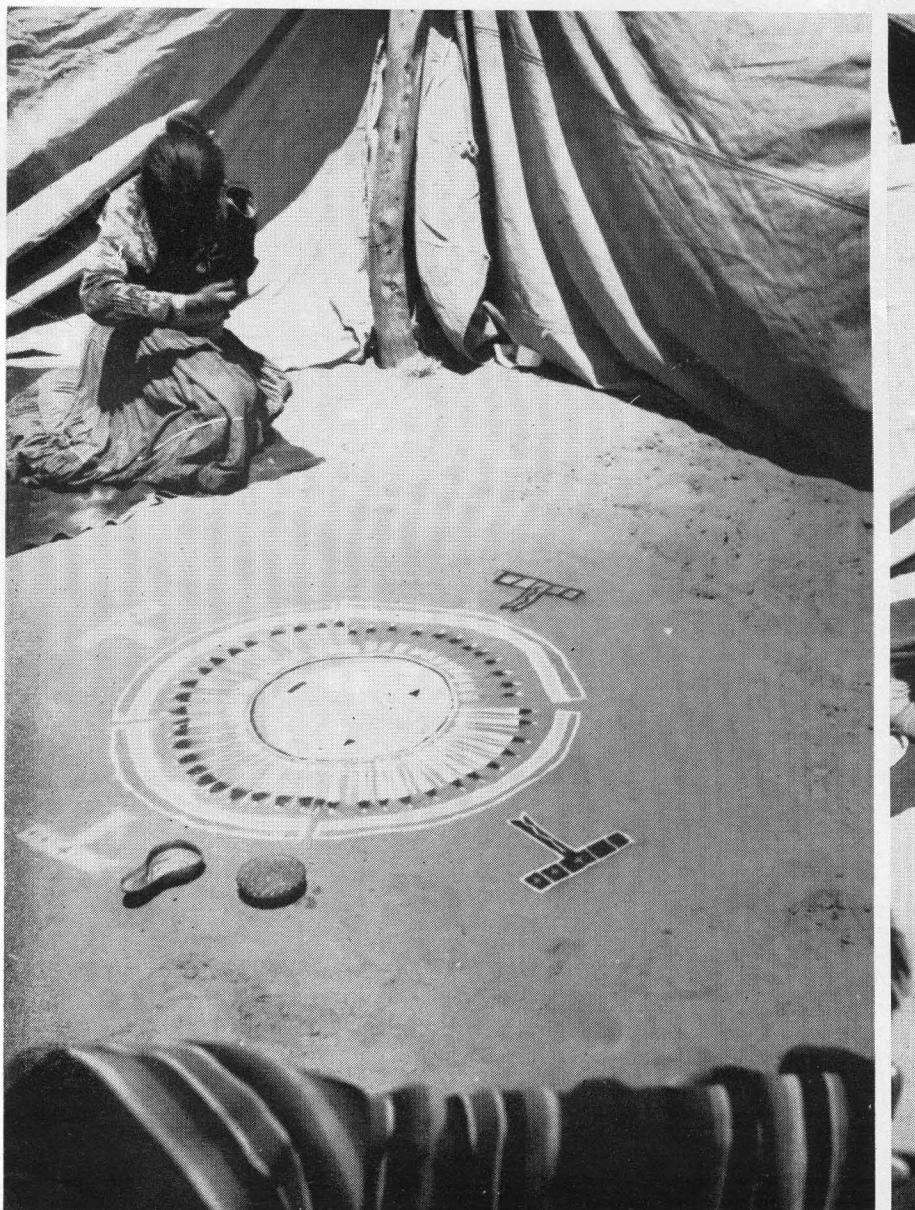
One day last summer Harry Goulding of the Monument Valley trading post in southern Utah invited me to accompany him to a remote Navajo camp where a healing ceremony was in progress. The photographs on this page were taken during the sing, with the permission of the medicine men and the family of the patient.

Sand paintings generally are made inside a hogan, but in this instance the ceremony was being held outside, within an enclosure of canvas draped with Indian blankets.

The patient was a young Navajo woman suffering from a mouth infection which had been causing great pain for several weeks. During a two-day period four different paintings were made, representing progressive steps in the ceremonial. After each had served its purpose it was destroyed and the top layers of sand containing colored pigments were scooped into blankets and carried some distance away from the camp and scattered over the landscape. This was an essential part of the ritual.

A majority of the Navajos continue to have faith in the healing prowess of their medicine men, but Harry told me that in this instance, as he had done many times before, he would prevail on the family to let the woman be taken to an Indian service hospital at Shiprock or Tuba City if the patient's condition did not improve.

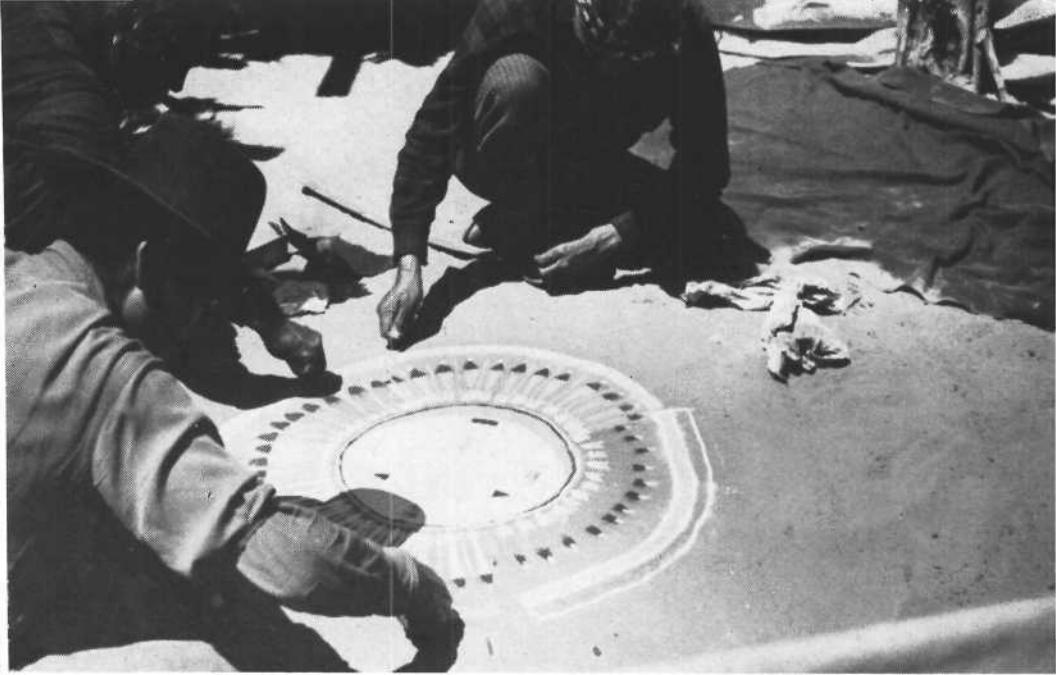
3 The patient is brought from her hogan as the painting nears completion and seated on a blanket on the ground partially disrobes in preparation for the ceremony. In the meantime several singers are chanting in the background.





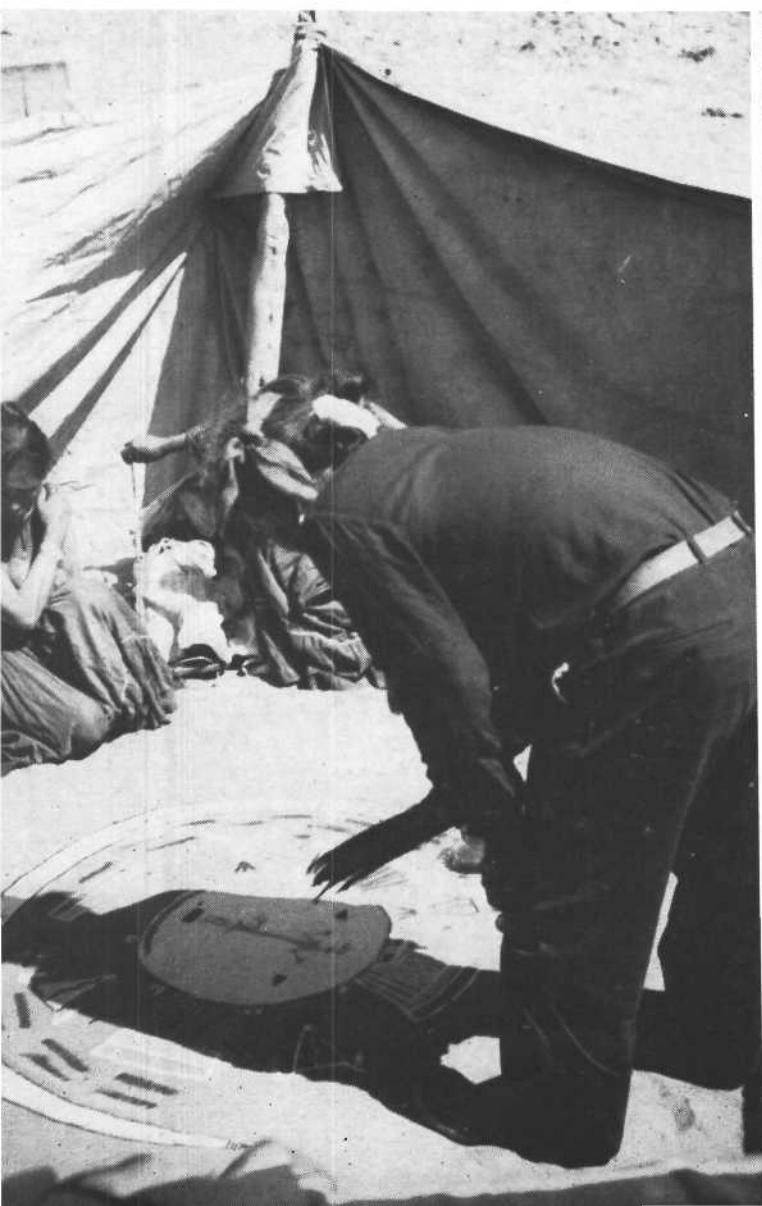
medicine men, assisted by relatives, work on the design. The pigments are applied by hand and are packed down between the thumb and forefinger.

5 Following the completion of the sand painting the medicine man with a brush of feathers goes through the ritual of cleansing the spot by dispersing any evil spirits which may be lurking about.



3 The sand painting nears completion. It is of intricate pattern of white, blue, reddish brown and black pigments. An error is never erased, the painter merely sprinkles common sand over the misplaced color and starts over.

6 The patient is then seated on the painting. At intervals she drinks an infusion of herbs and sprinkles her face and limbs from the same vessel. She remains here from 30 minutes to an hour while the singers chant their prayers.



Rains Needed for Desert Flowers . . .

Continuing cold weather and below-normal winter rains over most of the desert Southwest make it impossible to promise, this early in the season, anything approaching the spectacular display of wildflowers with which the arid hills and valleys were blessed last season, but if the rain gods smile on the desert country in March and April there can still be a profusion of colorful blossoms.

Conditions over most of Arizona, the Colorado and Mojave deserts in California, Nevada and Utah are much the same—cold nights and light winter rainfall. Warm weather and showers in February could still bring a fair display of blossoms to the lower levels of the desert. The higher altitudes generally get more moisture, and will have some late flowers regardless of rainfall on the desert floor below.

Reports from over the Southwest describe local conditions as follows:

JOSHUA TREE NATIONAL MONUMENT—Writing from Twenty-nine Palms, California, Monument Supt. Frank R. Givens points out it is "extremely difficult" to predict the prospect for spring flowers based on weather conditions during December and January. Rainfall has been below normal, but Superintendent Givens adds that "we have observed excellent displays of flowers with almost no rain during the early winter months." He points out that precipitation immediately preceding the flowering season is far more important. If rains come in March or April, there will be an abundance of flowers. And, Givens concludes, "we always have some flowers."

DEATH VALLEY RANCHO CHUCK WAGON HALF-INCH SCALE CONSTRUCTION KIT

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CASA GRANDE NATIONAL MONUMENT—A. T. Bicknell, superintendent, reports from Coolidge, Arizona, that there is no indication of a break in the dry spell and that the flower display "probably won't be very spectacular." Cactus will bloom normally, but annuals, such as the poppies at Picacho peak, will not be out in the profusion that they were last spring. Hedgehog cactus is about all that will be blooming in late February and early March.

LAKE MEAD NATIONAL RECREATIONAL AREA—From Boulder City, Nevada, comes another report of below-normal rainfall and cold weather, which leads Maurice Sullivan, park naturalist, to predict there will be virtually no wildflowers blooming in February. But down near Davis dam the lupines and desert lilies have already appeared above the surface in sheltered sand dunes, so these lovely and graceful flowers will be out to welcome desert visitors. Brittle bush, *Encelia farinosa*, was still quite dormant around the first days of February.

DEATH VALLEY NATIONAL MONUMENT—In California's Death Valley the success of blooming depends upon a combination of timed moisture and warm temperatures, according to T. R. Goodwin, superintendent. Since there was only a small amount of rainfall during the fall and winter the flower season "may be late," he concludes, but warns that early predictions can be changed when warm sunshine and rain combine at the right time.

ANTELOPE VALLEY—It's a different story in this region, where Jane S. Pinheiro predicts—after several on-the-ground surveys—that there will be a better-than-average flower season and that it will be very early. From Lancaster, California, she writes that the period of bloom will not be long unless there is more rain. But by February 1 there were already many California poppy plants in evidence, and by early February many gilia, both tri-color and birdseye, were up. Filaree were blooming before the end of January, indicating how early the season is. Hills around Antelope valley were getting green with miniature lupine and other plants. Different winter seasons seem to favor development of different flowers, last year there was hardly a poppy to be found, even in the Fairmont hills, one of the more famous poppy fields. But this year poppies and lupine are up in profusion.

SAGUARO NATIONAL MONUMENT—Unless there is additional precipitation during March and April, the smaller surface blossoming plants will not be "very spectacular" in this area, according to Samuel A. King, superintendent, Tucson, Arizona. Rainfall has been below normal, but there is still hope since it is impossible, King points out, to predict what conditions may be expected during the next two or three months.

COLORADO DESERT—Unless rains and warm weather come very soon, the sand dunes which were a mass of verbena and evening primrose last season will remain bare this year. Although January was very cold, a few sprouts of these two colorful wildflowers were showing in sheltered places and along the roadside, but the prospects are dim for such great fields of blossom as are seen in years of heavy winter rains. The common perennials, encelia, agave and the yuccas, which grow on the hillsides and at higher levels, generally blossom regardless of the rainfall on the floor of the desert, and may be expected to give color to the slopes in the late season. This is true also of the cacti.

MOJAVE DESERT—"Our Mojave desert season is about a month later than that on the Colorado desert, and we haven't had enough rain to encourage seeds to sprout—so far I haven't seen a single hopeful sign of new plant life." This was the early February report of Mary Beal, desert botanist, from Daggett, California. But she added that she would send in a report near the end of February.

Dignity and Elegance Among the Rocks

By MARY BEAL

After Spring's alluring pageantry of blossomtime has passed, a few late-blooming species usher in the desert Summer. Some of them make bright splashes of color that equal the sparkling hues of the vernal display. Others lack that chromatic splendor and show more subdued tones but not without charm and beauty. The Sunflower family is ever-ready to supply flowers for any season and among its more sedate types, suitable for Summer blooming, is the Brickellia group, sometimes called Brickellbush, named to honor Dr. John Brickell, early Georgia botanist. Belonging to the Eupatory tribe of the Composites makes them cousins to the well-known Boneset, Thoroughwort, and Joe-Pye Weed, remembered by older folks as nauseous decoctions for colds and malaria and a few other ailments.

Most of the Brickellias are shrubby and woody-stemmed, with few showy qualities, but one of the clan stands out as the flower of the flock, the White Brickellia, an attractive shrub of distinct individuality. It holds the stage with an air of dignity and elegance. Against the duller tones of the prevailing vegetation of the sandy and gravelly mesas and washes it frequents, the silvery sheen of its pale herbage is like a magnet to the alert observer with an eye for exceptional features. You'll find this ornamental Brickellbush listed botanically as

Brickellia incana
(In old botanies, *Coleosanthus*)

Many branches rise from the woody base to form a pale silvery-gray or white bush, 18 inches to 4 feet high. Stems and leaves are all over-laid with a dense covering of felty white wool but the white-barked stems eventually shed their cloak of wool. The broadly-ovate, felt-like leaves are slightly serrate, stemless or nearly so, an inch or less long. The flower heads terminate the branchlets and are larger than those of its close kinfolk, with 50 or 60 florets in the cluster, which is often an inch and a half across in maturity. The individual flowers are very slenderly tubular, creamy-white with maroon tips, each floret centering a circlet of shiny pappus bristles, which are longer than the corollas when they reach the fruiting stage, the crowning point of beauty for the plant.

'Tis then the heads open out into glistening, silky pom-poms, the whole bush scintillating and conspicuously handsome. Its range extends from the northern Colorado desert into western Arizona and southern Nevada, blooming from late May through the Summer. I collected the specimens for photographing in late June in the central Mojave desert.

Among the other Brickellias that cast in their lot with the Desert is

Brickellia californica

Following the same pattern of many stems and woody base, this rounded bush is 2 or 3 feet high and minutely rough-hairy, the long slender branches wand-like. The triangular-ovate leaves are an inch or two long, irregularly serrate. The flower heads are small, only 10 to 15 whitish florets in a cluster $\frac{1}{2}$ inch long, these arranged in rather leafy spikes or racemes. The roughish pappus bristles are dull white. The charm of the plant is its fragrance, especially noticeable and pleasing at night. You'll find it



White Brickellia (*Brickellia incana*)

from western Texas to California's Mojave Desert, especially common in Arizona at 3500 to 7000 feet elevations, crossing the border into Mexico and Lower California. Among some of the Arizona Indians it has repute as a headache remedy, the method of application very simple — just rubbing the leaves on the head.

As California Boneset it had vogue as an expectorant and a remedy for spasms and was also used as a substitute for tea.

Another species distinguished for aromatic qualities is
Brickellia watsonii

Named for Sereno Watson, successor to Asa Gray, and an early authority on California botany. This very fragrant small shrub is only a foot or so high, much-branched and minutely wooly-hairy. The light green ovate leaves are slightly toothed and somewhat glandular, $\frac{1}{2}$ inch, more or less, long, very small on the flowering branchlets, which are tipped by 1 to 3 heads of 13 to 18 whitish florets. It's a mountain climber, this little shrub, choosing rocky walls and ledges of the Panamint, Providence, and Clark mountains and ranges in western Nevada and southern Utah, blooming from July to October.

Another low many-branched shrub is

Brickellia arguta
(*B. atractyloides* var. *arguta*)

Usually less than 14 inches high, the older zig-zag stems dark gray, the younger ones whitish, both stems and leaves glandular-hairy. The leathery, ovate, sharply-pointed leaves are saw-toothed, $\frac{1}{2}$ inch to 1 inch long, their vivid green color giving the bush eye-catching prominence. There are 30 to 50 yellowish florets in the flower heads, which tip the branchlets singly, nested in very sharp-pointed involucral bracts, which curve outward conspicuously, less noticeable in the fruit, when they are off-set by the dull white pappus. It grows in the rocks below 4000 feet extending from the Inyo, Mojave and Colorado desert ranges into Lower California.

Similar in size and habit is

Brickellia oblongifolia var. *linifolia*

The numerous leafy stems arise erectly from the woody base 8 to 16 inches. The gray-green herbage is ashy-hairy and glandular, the pointed leaves oblong to linear, an inch or less long. The heads of 30 to 50 whitish florets are $\frac{1}{2}$ inch or more high. Its range is between 4000 and 6500 feet, from the western Colorado desert through the Mojave desert to Inyo county, Arizona, Nevada, and Utah, blooming from May through July.

MINES AND MINING . . .

Moab, Utah . . .

A group of seven uranium-vanadium claims in the Temple mountain district have been sold by Lawrence Migliaccio for a reported price of \$250,000, according to Jack Turner of Moab, who had been operating one of the claims under lease. The mines are known as the "Vanadium King" No. 1 to 7. Reported purchaser is the Nevada Mining, Milling and Engineering company. The Nevada firm plans to erect a concentrating mill either at the mines or in Greenriver, it is said.—*Moab Times-Independent*.

Phoenix, Arizona . . .

The Vanadium Corporation of America is behind a campaign to obtain a federal fund of 10 million dollars for construction of a modern highway between Denver, Colorado, and Phoenix, Arizona, through the Four Corners country where Colorado, Utah, Arizona and New Mexico meet. The proposed new route through the Navajo Indian reservation, according to D. W. Viles, general manager of the firm, would provide access to an area containing many known uranium-bearing ore deposits. Uranium resources sufficient to make this nation independent of any foreign supply "are known to exist" in the Four Corners area, Viles declared. Almost a complete lack of transportation facilities has prevented development of the deposits.—*The Mining Record*.

Washington, D. C. . . .

The house public lands committee has approved a bill extending the time in which claim owners may take advantage of the assessment work moratorium declared last year, and passage by congress is awaited. Last year's moratorium bill provided that claimants wishing to take advantage of the provision must file notice of intention by last August 1. If the new bill becomes law, deadline for filing the notice of intention will be extended to July 1 of this year.

Golconda, Nevada . . .

Manganese production from the Black Diablo mine in Pomeranckel valley, 21 miles south of Golconda, is reported ranging from 450 to 600 tons of ore per month. The Black Diablo was an important manganese producer during the war.—*Humboldt Star*.

Goldfield, Nevada . . .

Development work at the Deep Mines operation has revealed a deep-seated continuation of the main ore body, and local observers say that discovery of gold ore at this depth indicates that operation has only begun to tap potential reserves. From a winze put down to about the 455-foot level, drifting is underway on a large scale. Mine officials are secretive about actual values, but it is reported that enough ore has already been exposed to keep the 100-ton-per-day mill running for six months.—*Goldfield News*.

White Pine County, Nevada . . .

Filing of oil leases on the eastern Nevada public domain has continued unabated in recent months, and latest map of the lease area shows more than 400 individual leases on more than a million acres. Interest centers in White Pine and Elko counties.—*Goldfield News*.

Tonopah, Nevada . . .

Sale of the Kay Cooper tungsten mine by Cooper and Peterson of Gabbs to J. L. Dougan of Salt Lake City has been recorded. Purchase price was reported at nearly \$100,000.—*Times-Bonanza*.

Battle Mountain, Nevada . . .

There is an undeveloped copper deposit in an isolated section of Churchill county, Nevada, but development may follow release of a report made by the bureau of mines after a year's investigation by the bureau. Already a private company has taken a lease and option to buy property at northern end of the Stillwater mountains where bureau engineers worked for more than a year. Poor roads and rugged topography have hampered earlier development, according to the bureau.—*Battle Mountain Scout*.

Beatty, Nevada . . .

Ore of shipping value is being exposed by development work at the Lucky group of claims, 33 miles south of Beatty in the Lathrop Wells district, latest reports indicate. The crew has cut deep into a promising ore body which latest assays indicate contains 14 percent copper and 4 ounces of silver to the ton. In charge of operations is Tom Beard, Las Vegas, who has the ground under lease.—*Humboldt Star*.

Goldfield, Nevada . . .

Supt. William J. Frank of the Goldfield Deep Mines company has confirmed discovery of a wide ledge of telluride ore assaying \$22 to \$35 a ton gold in the White Rock claim, operated by the Red Hill Florence lease. The strike is said to have been made in a raise 30 feet above the 470-foot level, at a point where a rich streak broke into the fault zone. The ore is said to be similar to high grade ore taken from the Combination, Florence, Mohawk, Red Top and other famous mines in the early days of Goldfield.—*Humboldt Star*.

• • •

Salt Lake City, Utah . . .

Operations of the New Park Mining company properties at Keetley have climbed back to 95 percent of normal since last summer's shut-down. High-grade ore is being mined on the Pearl fissure, according to W. H. H. Cranmer, company president.—*The Mining Record*.

• • •

Little Lake, California . . .

This small community between Mojave and Lone Pine is the site of a new mining activity based on a deposit of volcanic building ash. It is believed to be one of the few commercially exploited deposits on the west coast. Building blocks made of the ash are light, but strong. They present an attractive burnished red color for both interior and exterior work, are resistant to earthquakes and provide natural insulation, it is claimed. The ash is mined from flats around the volcanic hill cone which, geologists believe, spewed forth one of the latest lava flows in that part of the desert.—*Los Angeles Times*.

• • •

Beatty, Nevada . . .

A pilot plant utilizing a new principle for gold ore reduction is being built on northern outskirts of Beatty by O. E. Walling, Seattle, and associates. If the principle proves to be practical, Walling has indicated, a larger plant will be built.—*Humboldt Star*.

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Santa Fe, New Mexico . . .

New Mexico's natural gas industry has received a wildcat boost with discovery of a probable new pool in the San Juan basin. The new well gauged 1.4 million cubic feet a day when it topped the Mesa Verde formation, according to the state oil conservation commission. The well was drilled by Herbert Herff, Memphis, Tennessee, independent operator.—*Gallup Independent*.

LETTERS...

Rough Country for Tenderfeet . . .

Hollywood, California

Desert:

On the morning of December 31, a few hours before the annual Pegleg Liar's contest in Borrego valley, we took the old Beatty road which once crossed the Borrego badlands between Borrego valley and Truckhaven.

Beyond Clark dry lake we noticed tracks in the sand—the tracks of three people who evidently had been trudging along this abandoned road in the direction of Borrego valley. Later we came upon their car, a Nash sedan parked in the middle of the road with no one around.

While we were discussing the possible fate of the occupants, a truck arrived, pulling up the wash in low gear, and in it were the owners of the Nash, a man, a woman, and a boy of 16. While the truck was hooking on to tow the car, we learned their story.

Without taking the precaution of inquiring how to get out of Borrego valley they had gotten onto this old road the previous day. They carried no shovel nor extra water or gas for their car. The sand was heavy and when the radiator boiled dry on the long pull up the grade past Clark dry lake, there seemed to be nothing to do but abandon the machine and return to the Borrego service station for help—a hike of nearly 20 miles.

They walked most of the night. Fortunately it was winter weather. In the heat of summer such an experience might have had tragic consequences.

I am passing this story along as a warning to those who venture onto the unimproved desert trails without adequate equipment and supplies.

W. PHILLIPS

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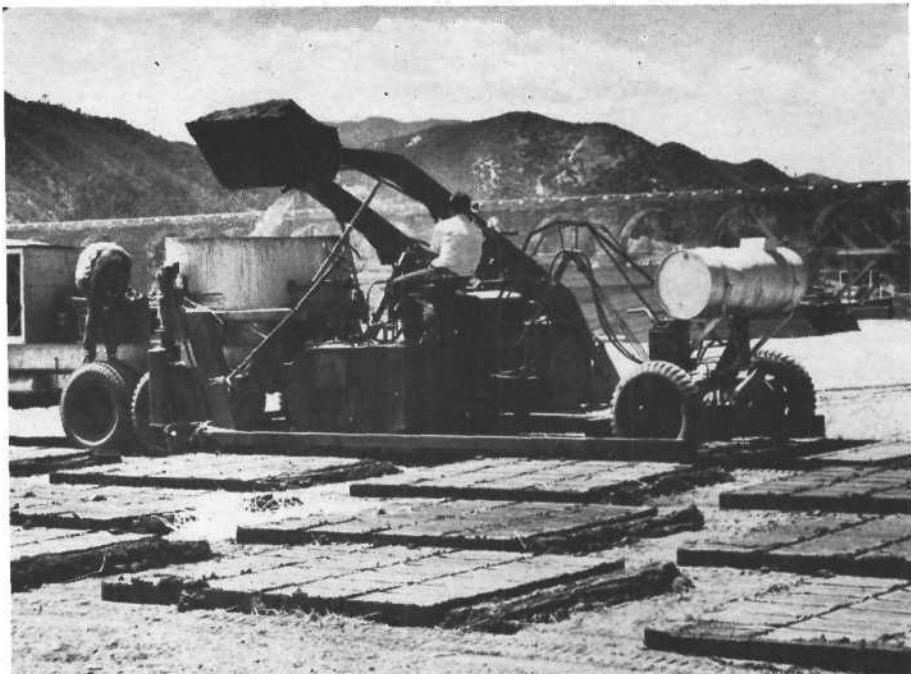
The Plight of the Goldminers . . .

Santa Ana, California

Desert:

I am informed that nearly all the gold mines in the Mother Lode country have suspended operation. The reason: While nearly everything else has advanced in cost, including wages, the price set by the federal government for gold has remained the same as was fixed in the early days of the Roosevelt administration. Under the circumstances, aren't claim owners at least entitled to a moratorium on assessment work until such a time as they can afford to mine their properties?

B. T. BAKER



Making adobes by machine. A scoop-equipped tractor pours a shot of water, to be followed by earth, into the tank of the mixing drum. Then a workman chucks in a bundle of straw. After thorough mixing, the mud is forced into a many-form mold, and the form is automatically lifted and the bricks left to dry in the sun.

Making Adobes in Texas . . .

Berkeley, California

Desert:

At the top of page 23 of the December issue, there is a statement that "no one has yet invented a machine which will make good adobe bricks of clay and straw and water." As of last May, when I visited the site, seemingly successful adobe bricks were being machine manufactured for the reconstruction of Mission San Antonio de Padua, near Jolon, California. A picture of one of the operations is enclosed.

JIM MORLEY

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Shine Smith's Christmas Party . . .

Tuba City, Arizona

Desert:

Many thanks to you and all the good friends who contributed so generously to our Christmas Party for the Navajo Indians in Monument Valley this year.

There were between 800 and 1000 Indians present. We distributed seven truckloads of food and clothing in addition to 3000 pounds of oranges sent to us from Phoenix. Barry Goldwater of Phoenix arrived in his plane during the day with four children and stepped out of the plane in the costume and role of Santa Claus.

We still have much clothing to distribute during the year when it is needed. Many of those who sent packages, said they had read about our party in the Desert Magazine. We thank all of you.

SHINE SMITH

No Taste For Jackass Jerky . . .

Portland, Oregon

Desert:

One of your contributors raved about the virtues of jackass jerky—burro jerky in polite society. Would eat it as a last resort after I've reached the bottom of my grub box, but I assure you it will never be a popular delicacy.

I think a burro is one of the grandest little animals God ever created. One of the best friends man ever had. He is good for many, many things—but not for making jerky.

JIMMIE JAMES

• • •

Here's Latest Pegleg Story . . .

Hemet, California

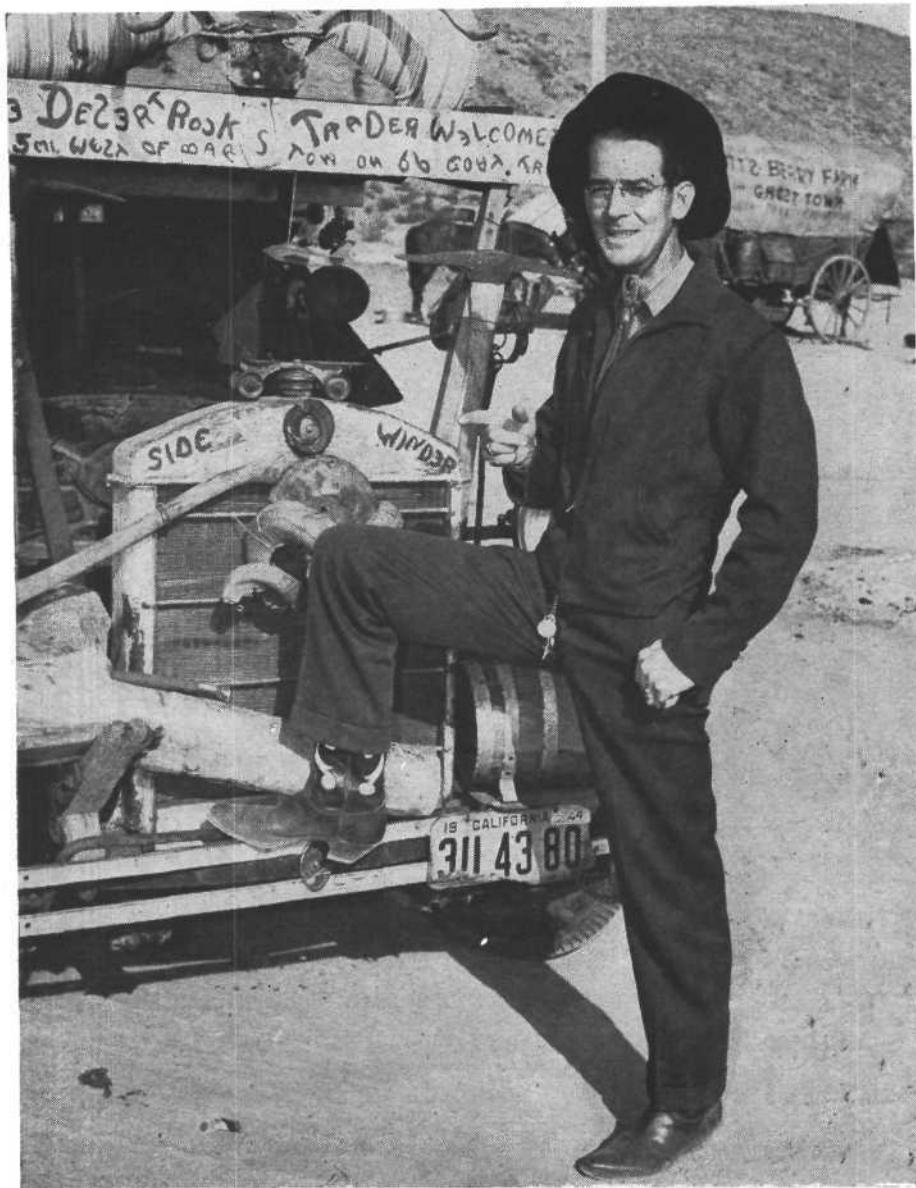
Desert:

I noticed in a late issue of your Desert Magazine that many people are interested in the location of the Lost Pegleg gold mine.

Now I know exactly where it is. I found it, or rather, was led to it by an old-timer who died shortly afterward. I was only a boy when this happened. We picked up something over \$1800 in nuggets in two hours—at a time when gold was worth only about \$15 an ounce.

The mine was covered up shortly afterward by a heavy sandstorm and it would take a steam shovel to remove the dune and reach it now. There were the three little hills Pegleg Smith told about—but I estimate there is 20 feet of sand over them now.

TOMMY RAWSON



Champion Liar Arthur D. McCain of Barstow, California—winner of the annual Liar's Contest held in Borrego Valley in connection with the Pegleg Lost Gold Trek on January 1. McCain travels the desert country in a motorized covered wagon which he has converted into a desert museum.

Paintings You Can Live With

In the art room of Desert Magazine's pueblo is exhibited some of the finest work of Southwestern painters—without any of the ultra-modern interpretations.

Here you will find the desert's own subjects portrayed in paintings you can understand and appreciate. "Paintings You Can Live With" is the slogan which governs the selection of work for this unusual art gallery, sponsored by the Desert Magazine staff.

J. Marie Ropp, director of the gallery says: "More and more people are removing mirrors from their mantels where they see only their own reflections, and are hanging an artist's concept of beauty—the rare artistry of desert subjects."

Desert Magazine opens its doors daily to hundreds of visitors who come to visit the gallery and the bookshop adjoining. The gallery remains open from 8:00 to 5:00 weekends.

'49er Pageant in Death Valley . . .
Reseda, California

Desert:

I am inclined to think your editorial respecting the Centennial pageant in the January issue, is a little too severe on so worthy an endeavor. Considering the tremendous obstacles to the task of presenting a pageant in such a place, we thought the result very good—the three-ringed circus, the bare legged majorettes, the stubborn oxen, and Jimmy Stewart's dramatization.

We were in the bumper-to-bumper line the six miles from Furnace Creek ranch to Desolation Canyon for five hours. The grandstand was packed, so we sat on the rocks on the hillside behind and overlooking the grandstand, along with thousands of others who would not be denied what they had come so far to witness.

Behind us on the hillside, sitting on a rock, with a powerful pair of field glasses scanning the performance, was a critic of critics. He complained that the oxen were the wrong type; that the Indians were too red; that the hills were too bare and the sky too blue. At last his glasses came to rest on the heroic rescue mule, and in triumph exclaimed, "Why, they even got the wrong mule, that one has two eyes."

We will long cherish the memory of the pageant and the wonderful weather; the tolerance of the over-worked police trying to maintain traffic; the kindness of the personnel of Furnace Creek ranch in aiding the thousands in some small way. It was all wonderful, even the bumper-to-bumper trek to Desolation Canyon, which would have been much more enjoyable at the time had we any assurance that we would eventually make it in time.

WALTER E. HENDERSON

• • •

He Should Have Been Hibernating
Carrizozo, New Mexico

Desert:

My friend Ira R. Allison was doing a bit of prospecting on the sunny side of Baxter mountain at White Oaks, December 31, 1949, knocking off a bit of rock here and another there. Well, he was alongside a ledge where some brush was growing out of the crevices, looking for likely samples when a rattlesnake struck him on the leg below the knee. His heavy clothes and underwear took most of the charge. Ira hastened to Carrizozo, where Dr. J. P. Turner treated his limb. The doctor did not have any anti-venom at this time of the year.

It was only about 100 feet from where Ira had his encounter with the rattler to a snow bank. So you see one can never tell.

ERNEST KEY

HERE AND THERE . . . on the Desert

ARIZONA

New Angle on Pegleg Yarn . . .

CHANDLER—The most famous of all lost mine stories, the Pegleg Smith legend, has been given a new lease on life by John D. Mitchell, long-time mining and lost mine enthusiast of the desert Southwest, and Radford W. Jones, California millionaire, who are planning an expedition to the California desert west of Yuma, Arizona, to search—as have hundreds of others—for the lost source of black gold nuggets allegedly discovered in 1828 by Thomas L. "Pegleg" Smith.

Pegleg himself was never able to relocate the three black buttes on the highest of which he claimed he picked up a handful of gold nuggets covered with what he called desert varnish. Mitchell believes he knows where the three buttes are located. He has a theory that the black coating on the yellow gold nuggets is concentric layers of pitch-blende. He thinks the yellow powder which encrusts the rocks around the walls and covers the floor of the little crater in which the buttes stand, is carnotite that has been leached from the pitchblende and re-deposited as secondary ore. And he thinks he knows where this Lost Valley of the Phantom Buttes is located, says he stood at edge of the crater-like depression more than 30 years ago, did not know at that time he had discovered the phantom valley.

More than a hundred men are said to have lost their lives searching for the legendary Pegleg Smith mine.—*Chandler Arizonan*.

Raising Bermuda Grass Seed . . .

YUMA—Bermuda grass, usually considered a farming nuisance, is proving to be a highly profitable crop for farmers of this irrigated desert area. They harvest its seed. Bermuda seed prices rose to a peak during the war when a call went out for every available pound of seed to plant on airstrips throughout the world. The seed skyrocketed to 70 cents a pound. It is still in demand, and most of the commercial seed comes from the Yuma area. The U. S. Soil Conservation service buys large amounts for erosion control; southern growers use it for pasture grass and for strengthening river levees; it is used extensively for lawns. Price is now down to about 40 cents a pound, but it is still a profitable crop.—*Yuma Daily Sun*.

Water for Bighorn Sheep . . .

YUMA—Fifteen watering places have been constructed by the U. S. fish and wildlife service on the Kofa game refuge in the desert hills near Yuma for the benefit of Arizona bighorn sheep and other wildlife. Before dams were built at strategic spots, the natural water seeps would often go dry during long seasons without rain. Animals travel long distances to reach the water holes provided by man.—*Yuma Daily Sun*.

"Restoration" Is Launched . . .

TOMBSTONE—A drive to finance Tombstone's restoration movement was officially launched with a week-long observance the last week in January. Aim of the project is to restore the one-time boom town, famed as a typical Wild West city, to its 1880 appearance. Telephone and power cables are to be put underground; modern signs replaced with those of the old days; wooden sidewalks are to be laid; overhangs replaced, and fronts of buildings restored to former styling.—*Tombstone Epitaph*.

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DEAR CUSTOMERS: Sorry we have no catalog. Because we handle Indian Artifacts and each piece is distinctive, cost would be prohibitive. We have lots of old and new rugs, baskets, jewelry and ceremonial things. Plenty of rocks and minerals, gold specimens and nuggets. We also have Chimayo blankets, coats and purses. We will be glad to ship. Tell us what you want and send the money. Daniel's Trading Post, 401 W. Foothill Blvd., Fontana, California.

FOUR VERY FINE ancient Indian Arrowheads, \$1.00; 4 tiny perfect bird arrowheads, \$1.00; 1 ancient stone tomahawk, \$1.00; 2 flint skinning knives, \$1.00; 1 large flint hoe, \$1.00; 2 spearheads, \$1.00; 10 arrowheads from 10 states, \$1.00; 20 damaged arrowheads, \$1.00; 10 fish scalers, \$1.00; 10 hide scrapers, \$1.00; 4 perfect saw edged arrowheads, \$1.00. The above 11 offers \$10.00, postpaid. List Free. Learns, Kirby, Arkansas.

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MISCELLANEOUS

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THREE DIMENSION, Cactus framed desert landscape pictures, size 6 x 8 x 2, \$3.00; 8 x 13 x 2, \$5.00. The Special 10 x 20 x 2 1/2, \$10.00. Diorama Studios, 1225 N. Anita, Tucson, Ariz.

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Mountain to be Named . . .

SAFFORD—Residents of Graham county expect soon to find out the name of the 40-mile-long range of mountains to the south of here which extends through part of Crook National forest in Graham county. The mountains have been there for a long time, but they have been called by a variety of names, including: Graham mountains, Mount Graham, Pinaleño mountains, Pinaleño range. Locally, Mount Graham has been most popular with Graham mountains running second. But now the board on geographic names in Washington is going to settle the matter. And the board will also name the three highest peaks in the eight-mile-wide range which lies between the Santa Teresa mountains on the north and the Dos Cabezas mountains on the south. Tallest peak is 10,700 feet high, has been popularly called Graham peak.—*Graham County Guardian*.

Wild Turkeys Are Planted . . .

KINGMAN—Wild turkeys are being live-trapped by the Arizona game and fish commission in a number of areas where surpluses exist to restock Ft. Huachuca, the Santa Rita mountains and the North Kaibab National forest. Ft. Huachuca and the Santa Ritas once carried good populations of wild turkeys, but no evidence has been found to indicate that turkeys ever ranged the North Kaibab area. Surveys by rangers lead officials to believe that turkeys will do well there, however.—*Mohave County Miner*.

Beavers Invade Town . . .

CLIFTON — Attempts of beavers who call the San Francisco river their home to occupy this eastern Arizona town have been thwarted. The river divides the town of Clifton, and the fur-bearing animals began to invade the city limits. Residents became alarmed that the busy beavers would cut down all the trees along the river banks. Plan of the state game and fish commission was to eradicate the rare animals, nine were trapped in three nights within the city limits. But sportsmen have protested and ask that the beavers be transplanted to streams farther north.—*Graham County Guardian*.

Reservation Permits Required . . .

HOLBROOK—Both regular Arizona hunting and fishing licenses and special Indian permits must be obtained by persons wishing to hunt or fish.

HOT MINERAL WATER: Heated by Nature. Temperature 110 degrees to 179. Five acres or more. Arthritis particularly should investigate. R. H. McDonald, Box 21, Phone 143, Desert Hot Springs, Calif.

HOME SITE near Borrego Springs for sale by owner. R. Lee Stowe, 1648 Cota Ave., Long Beach, California.

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on the Navajo Indian reservation. State, federal and tribal regulations must be observed. The tribal rules may be obtained at the time a permit is applied for. Application may be made by writing to the Navajo agency, Windowrock, Arizona. Sheep and cattle belonging to Indians have been killed in the past by hunters who entered the reservation without authorization.—*Holbrook Tribune-News*.

CALIFORNIA

New Roads to Desert Areas . . .

INDIO—Anza Desert State park and Borrego valley will soon have three new road entries which the state park commission has authorized. One, the Montezuma trail, will cut over the Santa Ysabel mountain range from the west—from near Warner's Hot Springs and Palomar mountain. A second, Indian Head trail, will skirt Rabbit peak and the southern Santa Rosa range across the Borrego badlands west of Truckhaven, entering the valley near Clark Dry lake. This will cut an estimated 38 miles off the present distance from Coachella valley to Borrego valley. The Anza trail, down rugged Coyote canyon from Anza to Borrego, is the third route proposed. This will follow the 1774 route of Capt. Juan Bautista de Anza up Coyote canyon to Anza, then to Hemet and Los Angeles.—*Indio Date Palm*.

Mullett Island "Coming Back" . . .

NILAND—Originally developed by Capt. C. E. Davis soon after formation of Salton sea by Colorado river floods in 1905-07, Mullet island in the below-sea-level inland ocean will again become a resort if Joe Rosamond of Niland carries out announced plans. Because water line of the sea is rigidly controlled by the Imperial Irrigation district—which uses the Salton sink as a drainage basin—Mullet island is no longer a true island, but an arm of land reaching out into the sea. It is about five miles west of Niland. Road to the island leads past the famed mud pots and paint pots.—*Indio Date Palm*.

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Sunken Dredge Being Raised . . .

NEEDLES—Work has started preliminary to raising a sunken river dredge which sank to the bottom of the Colorado near Needles recently. Crews have been dredging silt and sand from around the machine, and a coffer dam is to be constructed to divert the river's flow so the huge dredge can be salvaged.—*Palo Verde Valley Times*.

Navy Asked to Repair Road . . .

NILAND—The Imperial county board of supervisors has passed a resolution asking the U. S. Navy to repair and improve the Niland-Blythe road "to render it passable for public traffic during the time it is not closed for gunnery practice" This stretch of desert road is a link in the International Four-States highway from Canada to Mexico, has been closed by the navy three days a week because it traverses an aerial target range. It is the only direct highway connection between northern Imperial county and Blythe.—*Palo Verde Valley Times*.

WHERE PALMS GROW WILD . . .



In Palm Canyon, 5 miles south of Palm Springs, is the largest native palm oasis in Southern California—where visitors are always welcome to wander among the majestic trees and enjoy the beauty of one of the desert's most lovely canyons. You are invited also to inspect the lovely display of genuine Indian silver work, weaving, pottery, basketry and other crafts in Dean Kirk's

PALM CANYON TRADING POST

situated on "The Bench" where you park your car at the head of the trail leading down into the park of stately Washingtonia palms. Visitors are always welcome.

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- Overnight at Rainbow Bridge at Bill and Katherine Wilson's Echo camp.
- ALL-EXPENSE TRIP — 10 to 11 Days. Start at Art Green's Cliff Dwellers. Return to Cliff Dwellers in Arizona.

Full Fare - - \$175 per person

Several reservations and deposits were received in December and January, through this advertisement.

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18 to 22 Days. Fare: \$750

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Green River, Wyo.
At The Head of the Canyons

Arizona Ruling is Fought . . .

NEEDLES—There used to be reciprocity between California and Arizona in the matter of fishing and hunting licenses along the Colorado river boundary between the two states, but a recent ruling of the Arizona Game and Fish commission has changed all that and a series of arrests has raised a boiling controversy in the two states. Arizona contends that sportsmen from California must obtain Arizona fishing and hunting licenses if they want to fish or hunt on the Arizona side of the middle of the main channel of the river. To fight the case through, Californians along the river have organized the Colorado River Sportsmen's Protective league and have employed legal talent.—*The Desert Star*.

• • •

Power for the Desert . . .

TWENTYNINE PALMS — Steps are being taken to form an electric cooperative which it is hoped will bring the conveniences of electricity to this desert area and the greater Morongo basin. William Letcher, field representative of the R.E.A., has made a survey and formal application to the government for a loan is to be made, if a sufficient number of potential users in remote areas not now served by a private utility will sign up to use power.—*The Desert Trail*.

Historical Pageant on Border . . .

CALEXICO—Commemorating the exploring and colonizing journeys of Capt. Juan Bautista de Anza, who in 1774 and 1776 made the first overland trips from Mexico to California—which resulted in the founding of San Francisco—the border communities of Calexico, California, and Mexicali, Mexico, will join March 17-19 in the 11th annual presentation of the International Desert Cavalcade of Imperial Valley.

Feature of the three-day fiesta and celebration will be presentation of the Cavalcade pageant, a night outdoor historical pageant that traces history from before the first white man through the early explorations, days of the stage coach and covered wagons, reclamation of the desert and the disastrous Colorado river flood and up to the present.

The pageant will be presented two nights, Saturday and Sunday, March 18 and 19. The big international parade will be Sunday afternoon, while the traditional international banquet, with governors of four states from two nations attending, will be on Friday night this year. The Cavalcade will open with a parade on Friday afternoon in which school children of Mexico and United States will march across the border. Residents on both sides of the border get into costume for all of Cavalcade week.

• • •

Fear Mullet Extinction . . .

NILAND—Continued commercial fishing in Salton sea may make extinct the famous mullet which annually provide unequalled sport when they crowd up the fresh water rivers emptying into the sea to spawn. A resolution protesting commercial fishing has been sent to the state division of fish and game by the Imperial County Fish and Game Conservation association. Mullet will not bite ordinary bait, as they are vegetarians. There is no closed season for sport fishing, as only time the fish can be taken on hooks is when they concentrate for their annual trip up the river. Then fishermen snag them. Commercial fishing is with huge nets. Only a few fish were caught by sportsmen at mouth of the Alamo river last fall, and the conservation group is worried.—*Imperial Valley Weekly*.

• • •

Basketmaker Artifacts Shown . . .

LOS ANGELES—A special exhibit of Basketmaker artifacts will be on display at the Southwest museum, Highland Park, Los Angeles, during the month of March. They were excavated in 1930 by Arthur Woodward and are displayed through the courtesy of the Los Angeles County museum. The ar-

BY BOAT through the heart of the Southwest's most scenic canyon country.

Reservations are now being made for our 1950 expeditions down the San Juan river and through Glen Canyon on the Colorado to Lee's Ferry—191 miles in seven days. Stout river boats. Skilled boatmen. Good food.

Trip starts from Mexican Hat, Utah. Side-trips include Crossing of the Fathers, Music Temple, Mystery, Twilight and Hidden Passage Canyons, Outlaw Cave and the Famous Rainbow Bridge. For schedules and rates write to:

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tifacts were recovered from caves in Corn Field canyon, Utah. Also on exhibit will be some of the Southwest museum's finest Navajo blankets. The museum is open daily except Monday from 1:00 to 5:00 p. m.

BLYTHE—More than 3400 bales of cotton were ginned from this season's crop in the Palo Verde valley. The season has come to an end.—*Palo Verde Valley Times*

NEVADA

STEWART—Tribal delegates representing every Indian reservation in Nevada will band together in a planning committee to formulate a long-range Indian affairs program, looking forward to the day when the Indians will be permitted to manage their own affairs. E. R. Fryer, superintendent of the Carson Indian agency, indicated recently that time may come sooner than expected, "possibly by 1957." General chairman of the state-wide committee is Walter Voorhees. Local planning groups are to be formed on each reservation to outline aims and needs. Nevada's Indians already vote in state and national elections, enjoy full citizenship rights. Problems to be worked out for each reservation include housing, sanitation and economic development.—*The Humboldt Star*.

To Pave Scotty's Cut-Off . . .

BEATTY—Both state and federal approval for the project of paving the road to Scotty's Castle in Death Valley has been officially confirmed by the Nevada department of highways. The road connects with U. S. Highway 95 midway between Beatty and Goldfield, extends to the Nevada border only about three miles from the famous Death Valley structure in California. Part of the road is within boundaries of the Death Valley National Monument. Between 35,000 and 40,000 tourists visit Scotty's Castle each year. It is believed paving the road from Nevada will lead probably 75 percent of these visitors into Nevada. When work will start has not been announced, although the appropriation is for the calendar year 1950.—*Goldfield News*.

Colorado Run-Off Less . . .

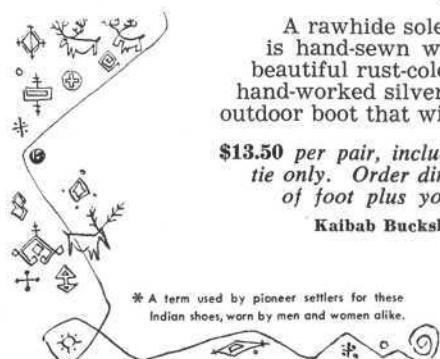
BOULDER CITY—The Colorado river, now harnessed to serve man, is expected to pour less water than last year into Lake Mead behind Hoover dam. Predicted run-off into the lake through July is nine million acre-feet, about 1.7 million acre-feet less than last year according to E. A. Moritz, region 3 director for the bureau of reclamation.—*Yuma Daily Sun*.

Old Prospector Avoids City . . .

GOLDFIELD—Bill Downs, 86-year-old prospector, lives only a comparatively short distance from Goldfield, but he has not been in the city in the past quarter of a century. Reason: there are "too many women and dogs" in Goldfield. Downs explains with a certain amount of logic that "the dogs frighten my burros and the women want to take pictures of them." The old prospector, who can still read and write without glasses, does go into Goldpoint infrequently to buy supplies. But he had an unhappy experience on one occasion there years ago. While he was in a store, some women untied his burros and walked them around. This was all right, but the women didn't know how to tie up the burros again. So when Bill came out, his little friends had taken off for camp 17 miles away in Tule canyon. "I had to walk the whole 17 miles, cussing them women half the time and the burros the other half," recalls Bill.—*Goldfield News*.

Kills Bobcat with Hoe . . .

GOLDFIELD—A bobcat which destroyed 39 young pullets belonging to Harry Miller was killed recently by the irate poultryman when Miller caught the wild animal in the midst of his early-morning slaughter. Dashing into the chickenhouse, Miller sent the bobcat sprawling with a kick, then seized a handy hoe and killed the animal. The predator had destroyed about half Miller's flock. Worst part of the whole affair was that the pullets had just started laying well.—*Goldfield News*.



* A term used by pioneer settlers for these Indian shoes, worn by men and women alike.

BOULDER CITY—A total of 356,778 persons visited Hoover dam on the Colorado river during the 12 months of 1949. This figure was about 12 percent below that of the year before. Unprecedented blizzards in January and February of 1949 held travel to a minimum. Had the weather been good, a record would have been set it is believed.—*Mohave County Miner*.

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A rawhide sole, cut and shaped to your own foot pattern, is hand-sewn with tough sinew to a high, soft upper of beautiful rust-colored buckskin. A buckskin thong or native hand-worked silver conchos hold the flap in place. A rugged outdoor boot that will give years of wear.

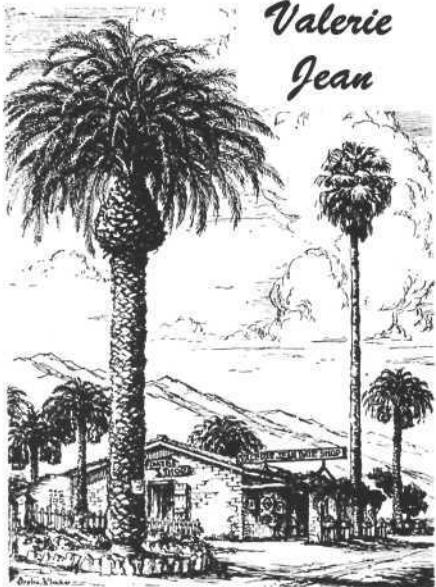
\$13.50 per pair, includes the silver conchos. \$12.50 with buckskin tie only. Order direct or ask for interesting folder. Send outline of foot plus your usual shoe size when ordering. Write to

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NEW MEXICO

Re-Vamped Indian Bill . . .

WASHINGTON—Passed by congress at the last session but vetoed by President Truman, the 88-million dollar Navajo-Hopi rehabilitation program is again in the congressional hoppers and has received approval of the house public lands committee. In its present form the measure contains a clause which would require the government to bear about 80 percent of social security costs for reservation Navajos and Hopis. This had been one of the most controversial features of the legislation.—*Gallup Independent*.

Young Folks Stay on Ranches . . .

SANTA ROSA—Ranch life in New Mexico must be good. At least a survey by Guadalupe county soil conservation officials indicates that young people raised on ranches are not deserting the soil and range for the alleged lure of the city. They are going off to school in many instances, but they come back and take over operation of the ranches on which they were raised, or acquire ranch homes of their own.—*Santa Rosa News*.

• • •

New Areas Electrified . . .

COLUMBUS—Rural homes in several additional sections of New Mexico are to have electric power for the first time, following approval of a grant to extend lines of the Columbus Electric Cooperative to a new area where some 400 members will be added. The new communities to be served are Rodeo, Hachita, Animas, Antelope Wells in New Mexico, and Cave Creek in Arizona.—*Lordsburg Liberal*.

• • •

Tourist Travel High . . .

SANTA FE—Although a drop had been anticipated, tourist travel in New Mexico increased two percent in 1949, but the actual number of persons in the visiting automobiles was down about three percent below 1948, according to Joe Bursey, tourist director. The tourist industry is New Mexico's top-paying business. The 1948 figure for passengers was a record, the 1949 total of cars was a record.—*Gallup Independent*.

• • •

Coal Big New Mexico Asset . . .

SILVER CITY—Coal is the largest assured source of energy in New Mexico, according to Charles B. Read, in charge of a U. S. geological survey of coal over the last three years. The study placed coal deposits in the state at more than 61 billion tons. Although coal mines have been operating in New Mexico since the coming of railroads in the 1880's, many of the coal field areas are relatively unexplored.—*Gallup Independent*.

WESTERN AIR LINES
AMERICA'S OLDEST AIRLINE

Ideal State for Rain-Making . . .

SOCORRO — New Mexico is an ideal place for experiments in artificial rain-making, according to Dr. Vincent Schaefer, cloud expert. He is research scientist for General Electric. Last summer "seeding" clouds with dry ice dropped from airplanes produced heavy rain on the east slope of the Manzano mountains, he reports. Only the clouds artificially seeded developed into rain storms. The U. S. army signal corps and the U. S. navy cooperated in the experiments. Dr. Schaefer said that clouds in New Mexico have all the requirements for precipitation except sublimation nuclei. These nuclei are supplied in the form of dry ice, creating a situation favorable to the release of rain. Another advantage is that in New Mexico clouds often occur as separated groups, rather than as a general overcast.—*Gallup Independent*.

• • • Ben Alfred Wetherill Dies . . .

SANTA FE—One of the discoverers of the now-famous cliff dwellings at Mesa Verde, Colorado, Benjamin Alfred Wetherill, died January 5 at Tulsa, Oklahoma. Ben and his brother John, who was widely known throughout the western Indian country, were riding after cattle on Mesa Verde when they discovered the cliff dwellings. The ancient cliff homes have been preserved and the area is now a National park.—*Moab Times-Independent*.

• • • Rain Gods Smile on Valley . . .

CARLSBAD—In a boom year aided by near-record rainfall throughout the Pecos river valley, farmers and ranchers of Eddy county enjoyed a gross income of nearly \$12,000,000 in 1949, according to Dallas Rierson, county agent. Cotton, beef cattle, hay and hay seed were leading sources of cash income.—*Eddy County News*.

• • • UTAH

Fossil Bones "Coming Home" . . .

VERNAL—Prehistoric fossils from the Uintah basin, now at the Carnegie museum in Pittsburgh, are going to be brought back where they belong and

will be placed on display in the Utah Field House of Natural History in Vernal. And to get the bones back, residents of Uintah county have raised the money to pay costs of the return—a total of \$3400. Although for 50 years out-of-state museums, universities and scientists have collected fossil material in the Uintah basin and taken it away for study and exhibit, not one dinosaur has been retained for local educational or scientific purposes according to Judge Henry Millicam, chairman of the committee to raise the \$3400. The committee wants to see this situation corrected.—*Vernal Express*.

• • •
SALT LAKE CITY—Improvement or new construction of 147 miles of state primary and secondary highways has been scheduled for the fiscal year beginning next June 30, the state road commission has announced. —*Salt Lake Tribune*.

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Guest accommodations on an operating cattle ranch.

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Auto camping trips to Monument Valley, Navajo Land, Goose Necks of the San Juan, Dead Horse Point, Indian Creek Canyon etc.

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Indian Freedom Recommended . . .

WASHINGTON — American Indians are "a very competent people" and a definite time limit should be set for their release from all federal restrictions, in the opinion of Rep. Reva Beck Bostone, Utah Democrat. A tour of the western Indian country last fall left her convinced that the Indians can make many contributions to improve modern

society. "We will gain by the infusion of some of their characteristics into our lives," she declared. "Perhaps we can gain some of their calmness . . . artistic ability . . . and their marvelous capacity for adjustment to new conditions." The congresswoman suggested 25 years as the time limit for end of federal control.—*Salt Lake Tribune.*

• • •

Utah Water Picture Bright . . .

SALT LAKE CITY—The 1950 water supply outlook is better in Utah than in most other parts of the arid Southwest. Assuming normal precipitation for remainder of the season, anticipated runoff is above normal for every important stream in Utah. For the six streams near Salt Lake City, the prospect is for 116 percent of normal flow. According to the U. S. weather bureau, forecasts are based on near-normal precipitation from January through June of this year.—*Salt Lake Tribune.*

"YEAR 'ROUND DESERT LIVING"

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For chicken or turkey raising or a little horse ranch none better than YUCCA ACRES, only \$350.00 per acre and up. Easy terms. Water, electricity, telephone, graded and paved streets.

A little business property still available. Schools, Churches, Clubs, etc.

FRED A STOREY, Developer
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ANNOUNCING AN EXPLORING EXPEDITION FOR YOUNG MEN OF HIGH SCHOOL AGE

During this seventh season of scientific explorations conducted for teen-age boys, Explorers' Camp will put two small parties into the field in the northern Navajo country and the southern Rockies.

Each boy will participate in four widely different expeditions and will travel more than 1,000 miles in the scenic "Four Corners" Region, which contains the nation's greatest atomic resources. Activities include searching for prehistoric ruins and petroglyphs; prospecting for gold and atomic minerals; archaeological excavations in a stone-age city; running 300 miles of the rugged San Juan River canyons in boats; and explorations in remote canyons tributary to the Colorado River in southeastern Utah.

Membership is limited to a small number of carefully selected lads whose desires for adventure, travel, and scientific fieldwork are not fulfilled by conventional summer camping. Cost for entire 9-week season, including travel by horses, boats and motor caravan—\$475.

* See Desert Magazine, November and December 1946.

For information Write: DIRECTOR, EXPLORERS' CAMP, Mancos, Colorado

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New Indian School Filled . . .

BRIGHAM CITY—Dedicated during the war to rehabilitation of wounded and sick bodies, the new Intermountain Indian school at Brigham City is now fulfilling an equally important function—the training and education of youthful minds. Formerly Bushnell General hospital, the structures are being converted into a school which will ultimately have facilities for 2000 students.

Intermountain Indian school opened in January with more than 500 Navajo boys and girls from different parts of the reservation in Arizona. They range from 12 to 19 years of age, are young people who have never been to school or who have had a minimum of schooling. Their program calls for achievement of two to three grades per year. Vocational training is included. Superintendent of the new school is Dr. George A. Boyce.

According to Allan G. Harper, general superintendent of the Navajo reservation, more than 800 young Indians clamored to be admitted to the school. No "recruiting" efforts were required.

At about the same time, two newly constructed dormitories at Shiprock, New Mexico, accommodating 128 Navajo boys and girls, were occupied. This further eased the critical situation on the reservation, but the need for educational facilities is still vast.—*Salt Lake Tribune.*

• • • Antelope Planting Program . . .

OREM—In an attempt to revitalize and build up small remnant herds of native Utah antelope, the elusive animals are being trapped in Daggett county under supervision of the Utah fish and game department and transplanted to desert areas of the state. The program is now in its third year. It is a federal aid project. Predator control work is also being done to make life easier for the antelope.

• • • Regional Forest Chief Dies . . .

OGDEN—William B. Rice, 61, regional forester for the U. S. forest service, died January 13 aboard a train at the Payette, Idaho, railroad station. Rice was one of 10 regional foresters in the nation. They are key men in the forest service. Rice had charge of 20 national forests of the intermountain region. He had spent his entire career since 1910 in the intermountain region.—*Salt Lake Tribune.*

• • • Wild Animals Still Roam . . .

VERNAL—Wild animals still roam the western desert. In Duchesne county, Utah, alone during 1949 bounty payments were made on: 82 coyotes, 22 bobcats and lynx; two cougars or mountain lions.—*Vernal Express.*

Gems and Minerals

NATION-WIDE DIRECTORY STARTED; IS HUGE TASK

Cooperation of rockhounds all over the nation will be required to successfully complete a difficult project undertaken by the American Federation of Mineralogical societies. Officers of the Federation have started to compile a directory of all members in all local mineralogical societies in the United States. The task can be speeded if secretaries of each local will send in immediately their membership lists for 1949 and 1950. These should be sent to: Prof. Junius J. Hayes, Secretary, American Federation of Mineralogical Societies, University of Utah, Salt Lake City, Utah.

Secretary Hayes would appreciate having the information submitted in this form: Name of society; name and address of president and secretary; Federation with which affiliated; meeting dates and meeting place; full names and home town of all 1949 and 1950 members.

It is believed the directory will be very valuable. For instance, members can get in touch with one another by correspondence as an aid to traveling or exchanging specimens, and various Federations will have their work simplified.

• • •

INEZ LEWIS OLERUD HAS FAMED AMETHYST

A superb group of Brazilian amethyst crystals from the famous collection of the late H. G. Clinton is now in the possession of his daughter, Mrs. Inez Lewis Olerud, Cathedral City, California. The 100-lb. block is a small portion of the largest amethyst geode ever discovered, found near the Uruguayan border. It weighed many tons.

The great mass—more than 16 feet long—was finally removed in sections, and pieces of the geode have been displayed and kept in collections over most of the world. The large block owned by Mrs. Olerud came from her father's famed collection. Geologist Clinton was owner of a mineral collection of 100,000 items. Both Dr. Clinton and his daughter have been widely known in mineral collecting and mining circles.

• • •

Members of the Coachella Valley, California, Mineral society went in search of bloodstones on their January field trip. The society is busy now, planning for a rock show March 10, 11 and 12, and having just completed an exhibit for the Riverside County Fair and Date Festival. With addition of six new members, the society now boasts a roster of 53. Meetings are the second Friday of each month.

• • •

The Nebraska Mineralogy and Gem club heard an unusual talk at January meeting of the group when Ralph Austin, petrographer, told how to "find out things about rocks" from studying thin sections under a polarizing microscope. Members came to the meeting in work clothes and practised on the six cutting and polishing units available. The club meets in Omaha.

NATIONAL FEDERATION INSIGNIA PROPOSED

At the request of the convention committee of the Midwest Federation, host to the American Federation convention in Milwaukee June 28 to 30, the American Federation is sponsoring a contest to select an insignia to be used by members of federated societies. The insignia will be designed to be used for lapel buttons, pins, car stickers. It is considered desirable that there should be a national emblem in general use, so that rockhounds may readily recognize each other anywhere in the country. If time permits, final judging will take place before the Milwaukee convention, so that pins and buttons may be available to members at the convention. Richard M. Pearl is managing the contest.

GILA VALLEY SOCIETY COMPLETES ORGANIZATION

Membership cards were issued to 38 rockhounds at final charter meeting of the new Gila Valley Gem and Mineral society, Thatcher, Arizona. President of the society is Joe C. Gable. Vice president is Corrine T. Wimmer, and Ina I. Gable is secretary. Rex Layton has been named the field trip chairman, Russell Lundell is program chairman and Lyle Grant display chairman. Mrs. Muriel Layton is librarian. At January meeting of the new society Mrs. Pearl Rogers gave an interesting talk on crystals, displayed her own collection and also demonstrated different types of fluorescent materials. This was all new to many of the members.

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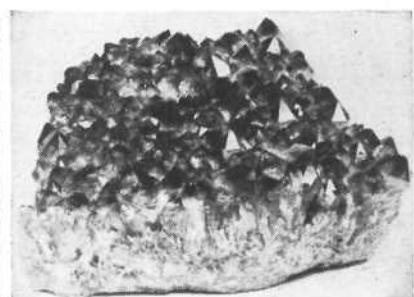
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AMONG THE ROCK HUNTERS

YOUTHFUL COLLECTORS WIN ESSAY PRIZES

Two youthful mineral collectors in Colorado and Michigan carried off top prizes in the first earth science essay contest sponsored by the American Federation of Mineralogical Societies. Fred F. Meissner, 18, Denver, won first place with his article on "An Epsomite Occurrence in the Tintic District, Utah."

Paul S. Hurd, 13, St. Joseph, Mich., won second place with his article on "Fulgurites," sometimes known as petrified lightning. The contest was open to all boys and girls under 20 who had not yet enrolled in a college or university.

"First Aid on Field Trips" was subject of a talk given by Charles Herbst, Beverly Hills high school, at January meeting of the Santa Monica, California, Gemological society. Fred Bitner showed colored slides of the Southwest, National parks and National Monuments. January field trip was to Last Chance canyon, John Hall was in charge.

Election of new officers was scheduled at the January 24 meeting of the Yuma, Arizona, Gem and Mineral society. For the program Thomas Goff, La Jolla, California, exhibited fluorescent minerals he has collected. On January 15 members went on a field trip in the desert area back of the army air base.

"Fifteen Years in Alaska" was subject of the talk given by Ora Schoonover at January meeting of the Oklahoma Gem and Mineral society, Oklahoma City.

"Collecting and Collections" was subject of a talk given by John F. Mehlcic, secretary of the Midwest Federation of Geological societies, at January meeting of the Chicago Rocks and Minerals society. Out-of-town rockhounds are always welcome at the Chicago meetings, held the second Saturday evening of each month, 8:00 o'clock, at Greenbriar Field House, 2650 W. Peterson avenue.

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GEM SOCIETY SPONSORS '49er COMMUNITY PARTY

The Searles Lake Gem and Mineral society, Trona, California, maintained its reputation for being one of the most active group of rockhounds in the nation when it staged the annual '49er Community party February 4. The entire community got into the spirit of the occasion and ghosts of pioneers walked again through Searles valley, coaxed out of retirement by pioneer garb and the whiskers sported by men of the region. The annual event helped raise funds for the society's proposed clubhouse and lapidary hut.

The society plans to have a field trip every month, with exception of June, when the Federation convention will be held, and possibly July and August.

January was a busy month for the Northern California Mineral society, Inc., San Francisco. On January 16 the society had its annual banquet and new officers were installed. On January 22 members enjoyed open house at the Charles Hansen home, where he placed his collection on display. During the colder months there are to be a series of open house affairs instead of outdoor field trips.

The assistant curator of the Kern county museum talked on Kern county history at January meeting of the Kern County (California) Mineral society.

Third annual Mineral and Gem show of the Monterey Bay, California, Mineral society was held in the Y. M. C. A. building in Salinas February 25 and 26 with minerals from all over the world on display. Specimens included rough, polished and mounted stones. One room was devoted to fluorescent minerals. The show was open to the public without charge.

An interesting talk on "Western Mineral Localities" was given by A. R. Fife at December meeting of the Texas Mineral society when members met in the Baker hotel, Dallas.

Christmas parties are still in the news, and one of the largest was enjoyed by the San Diego (California) Lapidary society. Officers and directors of the society prepared a bounteous meal which was served to 94 members and guests. This Christmas affair followed the society's second annual anniversary potluck held at the La Mesa home of Mr. and Mrs. Lee Harrison.

Members of the Minnesota Mineral club, Minneapolis, almost felt they had taken a trip through the West after seeing pictures shown by Mr. and Mrs. A. Borth, St. Paul, at January meeting of the club. The pictures included western United States and Canada. Minneapolis will be host city for the third annual national convention of the American Federation June 28 to 30, and the club is now working hard on that project.

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Specimens and colored slides illustrated a talk by Dr. Arthur Richards, Southern Methodist university professor, at January meeting of the Texas Mineral society, Dallas. Dr. Richards collected the specimens on a trip over the Southwest last summer. Thomas Copeland is president of the Texas society.

Members and guests of the Gem Cutter's Guild met in January at the West Los Angeles, California, home of Mr. and Mrs. Ralph Nowak for their annual Christmas party and auction. Slides for a club library of gems and their identification will be purchased with the proceeds of the auction. Regular January meeting was held at Manchester playground.

A special fluorescence show featured the January meeting of the Colorado Mineral society, Denver. Ray W. Thaler, vice president of the society, exhibited some of the specimens from his collection in Colorado. Assisted by Ress Philips, he demonstrated fluorescence and phosphorescence with both short and long wave ultraviolet lamps. Members brought specimens to be tested under the lamps.

January field trip of the Mineralogical Society of Southern California was to Tick canyon, a one-day trip from Pasadena. Specimens to be found there include howlite, colemanite, zeolite and agate.

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GEOPHYSICAL PROSPECTING DESCRIBED AT MEETING

Methods of geophysical prospecting with five instruments were described for members of the Mineralogical Society of Arizona, Phoenix, at their January meeting when Samuel J. Joseph, Phoenix geologist, was guest speaker. Five principal instruments discussed were the magnetometer, gravimeter, Gish-Rooney, seismograph and Geiger counter.

The speaker explained that mineral deposits or their associated structures produce magnetic and gravitational attractions or offer varying resistance to sound waves or electrical impulses. Interpretation of these reactions tells the expert much of what he wants to know.

Another interesting talk was given at December meeting of the group when Ben Humphreys, Cashion, Arizona, told about Arizona Pegmatites.

All available pieces of portable equipment were assembled for the occasion and at January meeting of the Nebraska Mineral and Gem club, Omaha, all members who wished got a chance to try their hands at cutting and polishing stones. Beginners were instructed by experts, and the result was that the event turned out to be more a class than a demonstration. Prior to the work session, members heard a talk by Ralph Austin, a petrographer with the corps of engineers.

Colored slides taken on a trip in Alaska were shown by Mrs. Beulah Gough at January meeting of the Long Beach, California, Mineral and Gem society. She also exhibited ivory, gold, copper, jade and Indian and Eskimo handwork she collected. At December meeting of the society new officers for 1950 were installed. They are: William Mayhew, president; Jessie Hardman, vice president; Jane Fisher, secretary; Frank Britsch, treasurer; V. P. Cutler, Jim Greene and George Raymond, board members.

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HOT SPRINGS, NEW MEXICO

The Feather River Gem and Mineral society, Paradise, California, has a new slate of officers for the present year. Officers are: Don C. Parker, president; John Gemsky, first vice president; V. J. Fasmussen, second vice president; Mrs. Iva Foster, recording secretary; Mrs. F. E. Rankin, corresponding secretary; George Foster, treasurer; F. E. Rankin, Oliver Freestone and T. F. Newberry, directors. At December meeting the society decided to incorporate so that property might be purchased for a clubhouse.

January field trip of the Mineral and Gem Society of Castro Valley, California, was to Valley Springs in search of moss agates. This followed the regular meeting January 13 in the faculty dining room of Hayward Union high school, the new meeting place. Tom Robb and L. O. Taylor put on a rock-grinding demonstration using actual bench equipment moved in for the occasion. Other expert club members made explanatory remarks during the demonstration. It was announced that the society now has seven good books on mineralogy which are available to members. Mrs. B. E. Sledge is librarian.

Experiences collecting and polishing rocks were described by W. Ellis Johnson at January meeting of the Pomona Valley (California) Mineral club. He is an expert at cutting and polishing large flat slabs and spheres. Johnson exhibited some of his work. In addition to describing the techniques involved in lapidary work, he told of collecting petrified wood, dinosaur bones and cutting material in many parts of the desert Southwest. The club's January open house was at the home of S. M. Buckwalter, Upland.

Members of the San Fernando Valley (California) Mineral and Gem society enjoyed seeing the collection of two junior members, Jimmy and Duane Higley, who provided some fine material for the display table at the January meeting. L. A. Norman Jr., California state division of mines, gave an informative talk on "The Responsibilities of a Rockhound." The January field trip was to Lavic.

An illustrated talk on "Gems and Jade in India" was given by Dr. Darrel Sedgwick at January meeting of the Santa Cruz, California, Mineral and Gem society. Dr. Sedgwick is a member of the society. He was stationed in Burma during the war. Mr. and Mrs. Gerald Butterfield displayed a group of minerals from their collection, and Wilson E. Thompson gave a short talk on classification of carbonate minerals. Four new members were welcomed into the society.

January field trip of the Mineralogical Society of Arizona, Phoenix, was to Crystal cave, an auto trip nearly 150 miles each way. In addition, there were two interesting January meetings. Members of the Phoenix group are already planning for participation in the Rocky Mountain Federation convention at El Paso, Texas, June 7 to 9, and at least a few members are expected to attend the national convention at Milwaukee June 28 to 30.

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GEOLOGY OPEN HOUSE PLANNED ON CAMPUS

The Agateers Gem and Mineral society in conjunction with the geology department of Mt. San Antonio college, Pomona, California, will hold a geology open house March 21 from 7:00 to 10:00 in the evening on the campus. The public is invited to view the displays, exhibits, demonstrations and films. The Agateers organized recently as a college geology club, President is Vern Bridges. Head of the geology department at Mt. San Antonio college is Darold J. Henry, author of *California Gem Trails*.

That the ladies are good gem cutters too was proven at January meeting of the Los Angeles Lapidary society when women members took over the meeting. Martha Meachen was chairman. Grace Peters told how to cut Oregon moss agate, Alpha Evans showed how she designs and makes her own engraving tools, Martha Meachen demonstrated cutting Horse Canyon agate and Jessie Chittenden showed samples of her silver designs. To close the evening, Claire Schroeder showed pictures of trips to various gem fields.

A field trip to the Helvetia mining camp late in January netted excellent specimens for members of the Tucson, Arizona, Gem and Mineral society. Their February meeting was on the 7th. January meeting was held at the state museum on the University of Arizona campus. John T. Roberts, mining engineer, spoke on "An Amateur Sees Peru" and showed slides.

New officers of the Mid-Coast Mineral club, San Luis Obispo, California, have been elected and have assumed leadership of the club for this year. Officers are: H. Douglas Brown, Shell Beach, president; Cleon Kite, John Bardin, and Ward Phelps, vice presidents; Hugh Westfall, Grover City, treasurer; Mrs. C. Mae Groth, San Luis Obispo, secretary.

March 26, 1950, will be a big day for the Calaveras Gem and Mineral society, Angels Camp, California, for on that day members will dedicate their clubhouse with grand opening ceremonies. Members of the club will display gems, gem materials and jewelry and there will be an auction following a potluck dinner. Money raised at the auction will go into the club's building fund. The clubhouse is located on Highway 49 between San Andreas and Angels Camp.

Charles W. Chesterman, associate mining geologist with the state division of mines, was speaker at February meeting of the San Jose, California, Lapidary society. He talked on "Pumice, Pumicite and Obsidian." He illustrated his talk with slides and specimens. It was announced that members who are to display their specimens and work at the March meeting are: Ross Page, Hal Pear soll, Norman Pendleton and Gertrude Pendleton.

February field trips of the Mineralogical Society of Arizona, Phoenix, were to Woodpecker mine on February 5 and to Pinacle peak on February 19. Members were kept busy last month, for on Friday, February 3, there was a meeting with a lecture on Crystallography by Prof. Paul Miller of Arizona State college, and on February 17 an auction and discussion of specimens. All rockhounds in the area are looking forward to the Rocky Mountain Federation meeting at El Paso, Texas, June 7, 8 and 9.

Rockhounds over the nation are reminded of the 1950 California Federation convention which will be held at Trona, California, June 17 and 18. It will be the first true outdoor meeting of rockhounds. There will be camping space for everyone and facilities for parking trailers. More information on this phase will be furnished. And to top it off, the convention is to be held in the heart of one of the best collecting areas in the state.

First annual exhibit of the Redwood Gem and Mineral society, Santa Rosa, California, will be held March 18 and 19 in show rooms of the Nash agency, 518 Third street. There is to be no admission charge. Both rough and finished gems will be displayed, cutting and polishing are to be demonstrated, and there will be an exhibition of ring casting and stone setting. The society has a display of fluorescent minerals considered one of the finest in Redwood empire. Outstanding jade, hand-wrought silver creations and a collection of more than 750 polished fire opals from Australia will be among the exhibits.

The South Bay Lapidary society, Manhattan Beach, California, is planning its first show. Although still a small group, members are enthusiastic and are already working on plans for the public display which is scheduled to be held in September. For information write to Mrs. Jane Hagar, vice president, 117 23rd Street, Manhattan Beach.

The recently organized Compton, California, Gem and Mineral club holds regular meetings the second Tuesday of each month. The club will welcome communications. Address them to Daisy Austin, 1812 Esmeralda, Compton, California.

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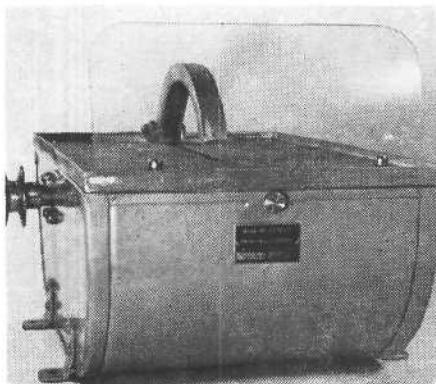
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AMATEUR GEM CUTTER

By LELANDE QUICK, Editor of The Lapidary Journal

LAST MONTH we promised to acquaint you with the facts regarding the mineral and gem display in America's newest museum. This is located in the State Exposition building in Exposition Park in Los Angeles.

For many years visitors could go to this building and see displays of the products from the mills, farms and mines of California. It was always the first place we headed for when we had a visiting easterner in tow for it was so easy to get that chamber of commerce spirit once you entered the doors. There you were confronted with the great relief map of California where you could point out the vastness of the state, the topography of the mountains, sea and desert. In wending one's way to the basement through simulated grottoes, one saw a window display of polished beach stones. This was not a display of cabochons but just polished whole beach stones. The display, originally intended for atmosphere only, became one of the most popular exhibits in the museum and that is why the authorities decided to give polished stones and minerals more thought when they planned to rebuild the museum.

The museum has been closed for nearly two years now and it is about ready to open again after being rebuilt. The visitor will never recognize it. A couple of months ago we took Dr. Frederick H. Pough, curator of physical geography and mineralogy at the American Museum of Natural History in New York, out there for a visit. He applauded many of the ideas that were being developed. The work has been undertaken by Herbert L. Kornfeld with the assistance of Art Posner and Richard Wolford. Early in the revamping stage Mr. Kornfeld visited us for advice. The result of this visit was that a concrete plan to bring the art of the lapidary before the people of California every day was originated. This idea was presented to the Los Angeles Lapidary society and a committee was appointed, headed by J. Howard McCormack, with Mrs. Belle Rugg and myself as members. Numerous conferences evolved the following plan:

The museum will have an active lapidary display daily from about 1:30 to 4:30. This will be a glass enclosed section where the visitor can see all phases of the lapidary art being performed by members of the various societies in Southern California. A schedule will be worked out where the year will be divided among the participating societies so they will all share equally in the task. Visitors will be able to converse with the working lapidary and they will be encouraged to ask as many questions as possible. The shop will be visited almost daily by bus loads of school children visiting the exhibits.

The purpose of the entire exhibit is two-fold: to present the story of California's wealth of gem minerals and how they are sought, discovered and prepared for jewelry. The observer will also be made acquainted with the use in industry of many of our minerals. To achieve this the observer is directed through a series of panel and case exhibits, each devoted to one phase of gemology. The continuity is as follows:

The south wall: Here a 20-foot panel begins with the methods of gem prospecting.

Two photos present this; one showing the prospecting for loose gems on a mountainside; another depicting prospecting by inference. Limited text explains the methods. Then comes a series of seven large kodachrome photos with copy inserted, explaining in detail the careful steps in gem mining. Beside this exhibit is a cross section of a gem mine showing a miner at work on the pocket zone. Hunks of the types of rock encountered are on a shelf beside the section, with arrows indicating the location in the cross section. While these exhibits are stationary the observer may touch them to aid in his understanding and appreciation. Having thus reached the actual gem material the graphic design leads from the pocket zone to a statement that less than one percent of the mined material is of jewelry quality. The balance is usually used industrially and its use in that field is shown.

The west wall: Behind a broad glass front a 13-foot shelf contains choice specimens showing the wide range of gem materials found in California. Beside each of these specimens will be displayed a finished stone of the same mineral. The location of each gem mineral will be indicated on a map above the exhibit. Forty-three types of California gems are thus shown.

The center fixture: Coming down from the beams across the ceiling are tapered fins supporting seven glass cases with panels above. Four of these cases tell the story of the industrial application of gems. To the left is a 7 1/2-foot panel broadly covering the history of gem minerals from the early preparation of pigments by cave men for wall painting to the first turquoise beads of the American Indian. On the south side of this fixture are three cases. Two of them house small lapidary machines in continuous operation in the preparation of cabochons and faceted stones. The basic gem cuts are discussed and the gems shown. The third case is devoted to the colors of gems. Above the case a panel explains refraction, reflection and dispersion in gems.

The east wall: This area will be treated solely for the mood effect, with mural paintings. The active lapidary display will be in a corner of the exhibit.

This account covers only the gem display. The mineral display will take up an even larger area and it will include what we regard as the best fluorescent display in any museum; a revolving and mirrored display that can be seen by many persons at one time.

Many volunteers gave their time and thought to this great project. The names of the dealers loaning the equipment will be given on cards. The preparation of the finished stones was undertaken by Ed Foerster of J. J. Jewelcraft company of Pasadena. All technical exhibits were supervised by Dr. Richard Jahns of the California Institute of Technology.

All Southern California people should see the new museum as soon as it opens in April and other visitors as soon as they come to town. Los Angeles county societies should plan an early visit (after May 1) as an official "field trip." Excellent picnic facilities adjoin the museum and the world's largest rose garden will be in full bloom opposite the museum. If you like it will you let them know about it?

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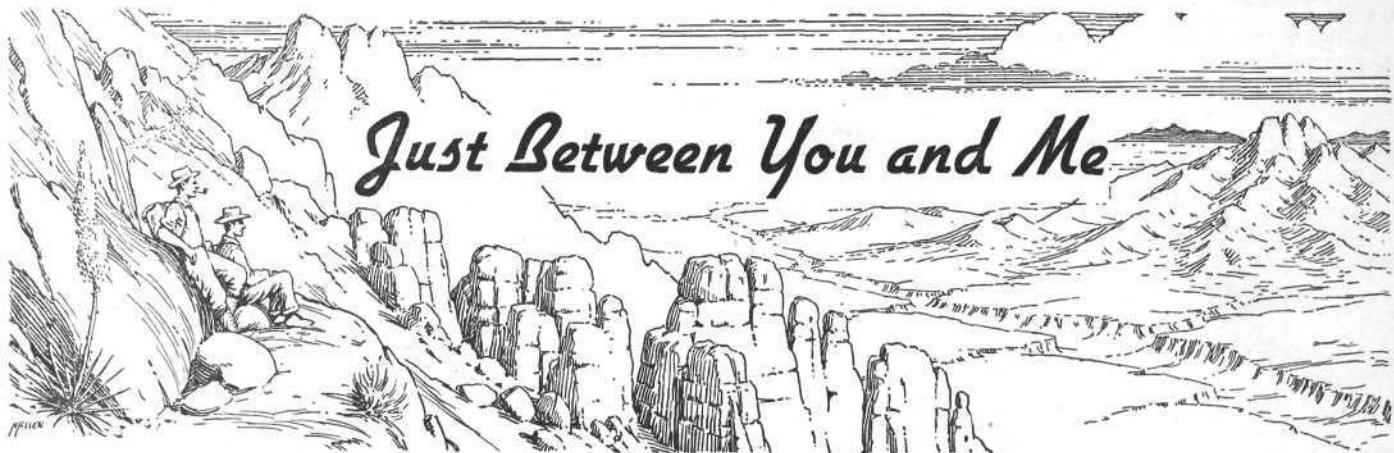
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THE *Desert* MAGAZINE
PALM DESERT, CALIFORNIA



Just Between You and Me

By RANDALL HENDERSON

OCCASIONALLY I get a letter from the captain of an oil tanker who has a tramp run between Yokohama, the Persian Gulf, Guam and a score of other ports on Pacific shores. He lives in a world far removed from the Great American Desert. His letters are always interesting and refreshing. Recently he stopped at Guam, where many American lives were lost during the war.

After the war was ended Uncle Sam paid the natives for the cocoanut trees and huts destroyed during the shelling and for other damages to their homeland. Also, many of them have been on the payrolls of the American occupants.

That brought too much prosperity to the Islanders. They have been neglecting their cocoanut groves and their fishing boats—and living out of tin cans. But there may be hard days ahead, for Uncle Sam is considering plans which may reduce Guam to a minor outpost.

If this takes place the natives of Guam will have completed in one generation a cycle which takes hundreds of years in more advanced civilizations. Wealth and ease bring boredom and decay. And when the people grow soft, sooner or later a hard hungry horde of men come along and take over. At least that is the lesson we learn from the history books. The natives of Guam in their own little world are staging a fast-motion review of the historical cycle.

• • •

In the mail this week came a little four-page folder from Yuma, Arizona, titled the *Yuma Bandolero*. My Spanish is very rusty and I do not know the translation of *bandolero*. But I can understand the English inside the folder—and what I find there is so worth while I want to pass it along to other desert communities.

Someone in Yuma, with more than ordinary vision, conceived the idea of weekend community caravans into the surrounding desert, to enable local people to get better acquainted with scenic charm, the historic monuments, and resources of the land in which they reside and make their living.

Two or three weekends each month during the winter season a caravan of Yuma motorists heads out along the highway to the point selected for that week's excursion. It may be the historic natural tanks at Tinajas Altas, the famous ghost mining camp of Fortuna in the Gila range, Laguna dam on the Colorado river, or a jaunt to the headwaters of the Gulf of California. There are a hundred interesting places to be visited within a radius of 125 miles of Yuma.

The motorists take their picnic lunches and spend the

day hiking, fishing, hunting for gem stones or taking pictures and exploring places they have never seen before. Some of them go out the previous day and camp overnight.

The Yuma folks really are getting acquainted with their desert. Instead of rushing off to the nearest metropolis as many hundreds of desert people do on weekends, the Yumans are discovering the charm of their own desert playground.

With the exception of Palm Springs, where Director Lloyd Mason Smith of the Desert Museum is conducting similar excursions every week, and the Don's club Travellers out of Phoenix, I know of no other community in the Southwest where such trips are being sponsored. In Yuma the sponsors are the Yuma Department of Parks and Recreation, and the County chamber of commerce. If more desert chambers of commerce became interested in this kind of activity I would have to retract some of the uncomplimentary remarks I have printed about lack of vision on the part of chamber secretaries.

I think I can hear some of my desert neighbors saying: "That is all right for Yuma with all those interesting places to visit, but we have no place to go—just barren desert."

And that perhaps would be a valid excuse if it were true. But it isn't true. The charm of this desert is its infinite variety—and there is not a single desert community in the whole Southwest that is not within range of literally scores of fascinating places and rare natural phenomena. Not all of them can be reached on a paved road—but after all, there is no better recreation on earth than hiking—and there are no better companions for such a trip than a camera, a botanist's manual, a prospector's pick or a microscopic lens. One doesn't really get acquainted with the desert until he or she acquires a microscope. For the broad scenic horizon is occupied and peopled with a billion tiny entities—each of which is a world unto itself.

• • •

The rain gods of the desert have not been generous this winter, and unless heavy showers come very soon the spring wildflower display will not be up to normal. There will be some blossoms in favored spots, but the colorful landscape of last year will not be seen—not this season.

But the floral show is not lost—merely postponed. For billions of tiny seeds will remain dormant in the sands, awaiting the time when sufficient moisture will start the miracle of germination. It may be one year or three or ten—but they will blossom eventually. And if we have to wait, perhaps we will prize them the more highly when they do come.

BOOKS OF THE SOUTHWEST . . .

DR. COLTON TELLS STORY OF HOPI KACHINAS

Hopi children are taught to believe in Kachinas just as small Anglo-Americans believe in Santa Claus. But to the elders of the Hopi Mesas the Kachinas are deities who dwell in the San Francisco mountains and other high peaks. They play a role somewhat similar to that of the saints of the Christian religion, carrying prayers to the Hopi Gods.

There are at least 250 different Kachina personalities—each in his own colorful and very distinctive costume. It is in an effort to clarify the role of these pagan deities, and to enable students of Indian life to identify them that Dr. Harold S. Colton, director of the Museum of Northern Arizona at Flagstaff, has prepared the most comprehensive study yet published, under the title of *Hopi Kachina Dolls*.

Dr. Colton said he wrote the book in self defense for a double purpose: first to satisfy thousands of requests for identification of at least 250 varieties of Kachinas and second to aid in distinguishing fake dolls from the genuine.

To help identify the staggering list of Kachinas, the author has devoted 53 pages of the 144-page book to authentic pictures of the Kachina doll



One of the 250 Kachinas

heads plus eight pages of color photographs made by Jack Breed.

Three beginning chapters of the book deal with the Kachinas' general make-up with chapter four identifying the 250 varieties.

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The author, Dr. Colton, is not new to the Southwest. He is probably the only man in the United States who holds two jobs a nation apart. He is professor of zoology at the University of Pennsylvania and director of the Museum of Northern Arizona.

A prolific writer, he has published in the way of books: *Days in the Painted Desert and in the San Francisco Mountains*, written with F. C. Baxter; *Handbook of Northern Pottery Wares*, written with L. L. Hargrave; and *Inverted Mountains*, written with W. F. Heald and E. D. McKee.

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Published by University of New Mexico Press. Nov. 1949. 144 pp. Index. \$7.50.

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